

COMPLIMENTARY ISSUE!

THE SHOPPER'S GUIDE TO NEW PRODUCTS

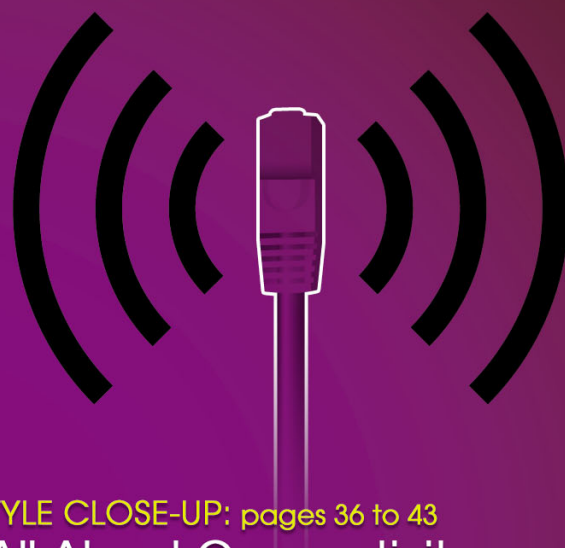


FIRST GLIMPSE

FirstGlimpseMag.com

# FirstGlimpse®

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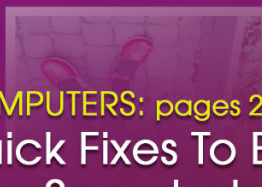


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IT'S ALL ABOUT CONNECTIVITY

MARCH 2010





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Our plain-English approach has served audiences well for 30 years, ensuring they receive accurate and unbiased technology information to meet their needs.





# FirstGlimpse®

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## The Connected Home

### Discover New Possibilities With Today's Technology

TODAY A WIDE VARIETY of digital devices and technologies work together to make all kinds of information available whenever and wherever you need it. Stream movies to your home theater; download photos from a relative overseas to a photo frame in your living room; or upload music from your MP3 player to your car. Whatever you want to do, there's a product out there to help you do it. Use this digital home blueprint to identify the types of things you want to do, and then go to the appropriate pages to learn about related products and technologies.

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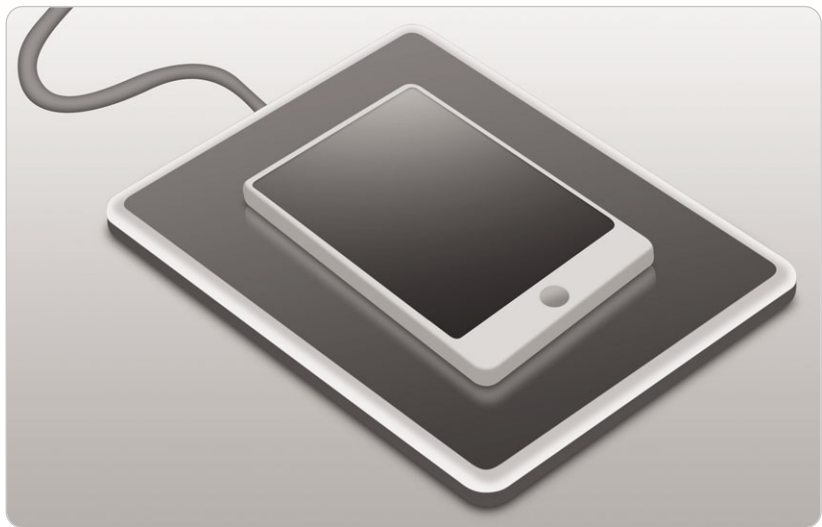


# ce news

COMPILED BY ANDREW LEIBMAN

## Wireless Power Standard In Final Stages

The Wireless Power Consortium, the organization behind the still in-development wireless charging standard, recently announced that the specification will be finished by the middle of this year, after which device makers can begin to launch products. Wireless charging uses magnetic induction between a pair of closely aligned metal coils. Users simply place a compatible electronic device on an outlet-powered charging surface that features a metal coil beneath its surface. The initial standard will handle low-power devices, but a later revision will handle wireless charging for notebooks and other large devices.



## Chevy Volt Gets Chatty With Your Smartphone

Smartphones just got a little smarter. GM's hotly anticipated electric car, the Chevy Volt, will be able to talk to your smartphone when it launches before the end of the year. Directed Electronics, the company responsible for OnStar, has announced an application that lets subscribers send the car commands directly from their smartphones, for things such as starting remotely, door locking and unlocking, security system arming and disarming, and trunk popping. When the Volt rolls off the assembly line, Directed Electronics' Smart Start application will include several Volt-specific features, enabling Volt owners to use their iPhone, BlackBerry, or Android smartphone to remotely engage the heating or air conditioning, charge the vehicle or schedule charging for off-peak hours, and view the status of vehicle systems and mileage statistics.

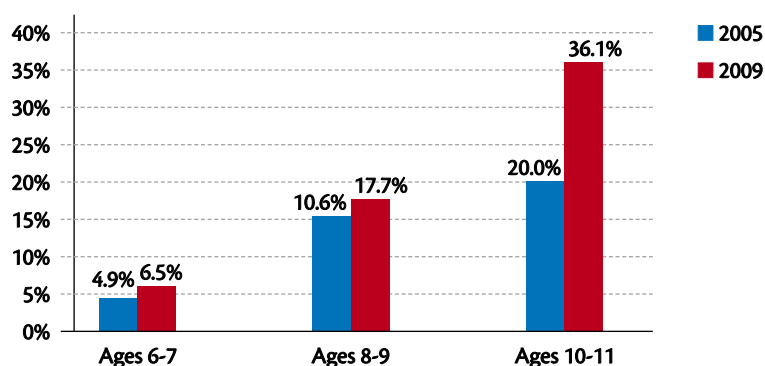




## One In Three Kids Owns A Mobile Phone

In technology adoption, five years can seem like forever. But according to Mediamark Research & Intelligence, an industry analysis firm, mobile phone ownership among children ages 6 to 11 has increased 68% over the past half decade. The American Kids Study 2009 reports that in 2005, 11.9% of kids in this age group owned a mobile phone, but as of 2009, that number had ballooned to 20%. The study reveals that between 2005 and 2009, the proportion of children ages 6 to 7 who owned a mobile phone increased nearly 33%. The proportion increased 67% for children ages 8 to 9 and 80.5% for children ages 10 to 11.

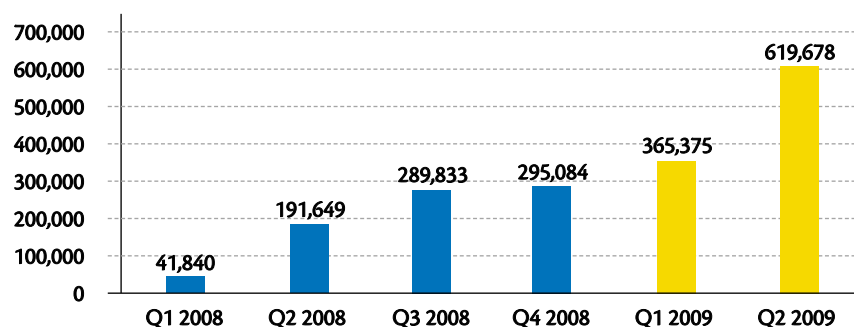
Kids With Mobile Phones



## Connected TVs Are Hot

Quixel Research released its latest report on the sales of connected TVs, or TVs with Internet capabilities that let you tap into YouTube, Netflix, Facebook, and more from the comfort of your sofa. The latest figures show that connected TVs have the sixth straight quarter-to-quarter increase in units sold in the United States. The firm's findings also show that the latest numbers indicate a significant uptick in units sold; between Q1 2009 and Q2 2009, connected TV shipments rose approximately 40%. Compared to Q2 2008, unit sales were up 70%. Quixel reports that the total value of the connected TV market, in both LCD and plasma TVs, was \$1.08 billion in Q2 2009.

Connected TVs Sold



## tidbits

Online video continues to be popular, but only a few Web sites garner a significant portion of the online video views in the United States. More than 170 million Internet users viewed a record-breaking 31 billion videos online in November 2009. Google-owned sites were responsible for 39% of all videos viewed online, mostly YouTube, followed by Hulu (3%), Viacom Digital (1.6%), and Microsoft sites (1.5%).

Source: comScore

A security firm announced the findings of a study that examined 32 million passwords recently exposed in a high-profile breach. The study reveals that frequently used passwords leave users vulnerable to data theft. The top five most-used passwords include "123456," "12345," "123456789," "password," and "iloveyou." Other gems include "princess" and the favorite of the alphanumerically inclined, "abc123."

Source: Imperva

The mobile application business is one that's only getting bigger. Gartner predicts that consumers will spend \$6.2 billion in mobile application stores in 2010. The firm also expects smartphone owners to download more than 4.5 billion applications in 2010, 80% of which will be free.

Source: Gartner

Dry cleaners find lots of interesting things in garment pockets, but a surprising number of the forgotten trinkets can represent a security risk. According to CREDANT Technologies, last year, dry cleaners in London alone found approximately 4,500 memory sticks in the pockets of clothes left for cleaning.

Source: CREDANT Technologies

Source: Mediamark Research & Intelligence

Source: Quixel Research



# HOW TO BUY An A/V Receiver

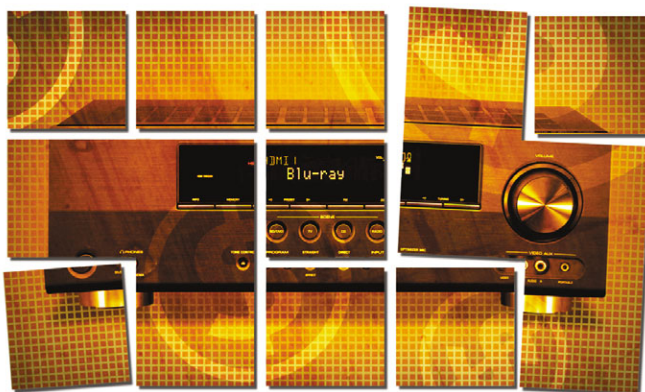
## Bring Out The Sound

**F**olks who gradually build their home theaters often start out by relying on their TV's built-in speakers. Over time, though, many people feel the need for a little more volume, bass, and stereo separation (distance between left and right speakers). Each of these adds more in-the-moment realism to, say, your teenager's action movies and racing games.

Some users simply hook up a set of analog PC speakers to their DVD/BD (Blu-ray Disc) player. The typical result is a noticeable hiss that makes the witty banter in Mom's rom-coms sound like it was recorded in the 1970s. More importantly, the majority of PC speakers lack the digital audio connections home-theater equipment requires for the best sound experience.

If you want to hear surround sound from most current BD/DVD players and game consoles, you need an A/V receiver. A receiver can amplify your movies, sports, and music as loud as its RMS (root mean square) wattage rating allows. Next, it sends that audio to speakers and, typically, a subwoofer for rich bass.

An A/V receiver also has the ability to pass a video signal along to your HDTV, which can ensure proper "lip sync" between the picture and sound. Some models even upconvert DVD video to HDTV resolutions. For best results and future-proofing, we recommend buying an A/V receiver with support for HDMI 1.3 or later connections.



By far, 5.1-channel receivers are the most popular. These support five speakers and a subwoofer. Most movie discs, except old films and TV shows, have 5.1 sound mixes. Some, including a number of BDs, also have 7.1-channel soundtracks that take advantage of the two extra rear speakers a slightly more pricey 7.1 receiver can support. A 7.1 setup can produce a more enveloping form of surround sound.

### Compatibility

Fortunately, you don't have to worry about incompatibilities among your

receiver, speakers, and BDs/DVDs, for the most part. A 7.1 receiver will also work fine with a 5.1 or stereo speaker set you already own, for example. In the same vein, a 5.1 setup will send a classic film's mono sound mix to each speaker and will scale down a recent flick's 7.1 soundtrack.

Incompatibilities can be a problem, however, if a receiver doesn't support the audio formats your BD player can't decode (make audible). For instance, if your player can natively decode every audio format except for Dolby TrueHD and DTS-HD Master Audio, you can add support for those high-end formats by buying a receiver accordingly.

### HTBs

Finally, you can buy a receiver bundled with speakers, a subwoofer, and often a BD or DVD player. Called an HTB, or home theater in a box, such a kit is the simplest route to making the big game audible over the noise of your March Madness party or filling your living room with the metallic groans of the sinking Titanic. **PG**

BY MARTY SEMS

### Sound Bites

- A receiver's RMS wattage rating gives you an approximation of its maximum volume.
- An A/V receiver with HDMI lets video pass through it to your HDTV.
- Most home-theater receivers support 5.1- or 7.1-channel surround sound.
- An HTB comes with a receiver, speakers, speaker cables, and often a BD/DVD player.

FirstGlimpse

# The Big Screen In Your Basement

## Is A Projector Right For You?

**W**hether you are watching the big game or the latest blockbuster, doing so on the largest screen possible can help you immerse yourself in your entertainment. So, if you want a true home theater, there is simply no substitute for a front-projection system.

Don't confuse the front projectors we're discussing here for rear-projection sets. The latter are self-contained HDTVs that use an internal projector placed behind the screen to display video. Front projectors work like the ones at a movie theater, using a powerful lamp to throw light across a room and display video on a large white or gray screen.

### Projector Pros

The obvious advantage of a front projector is screen size. You can purchase a screen that has the perfect dimensions for any room, with much larger sizes available than is the case with LCD, plasma, and rear-projection HDTVs. Beyond that, front projectors work great in some rooms because the only thing you need on the wall is a screen and some speakers. All your other components can be tucked away next to the projector on the other side of the room, giving the wall with the screen a neat look that screams "home theater."

If a front projector sounds like the right match for your home-theater room,



make sure it supports HD (720p or 1080p) and feed it high-def content, such as Blu-ray Discs and HD cable or satellite feeds, whenever possible. Blowing up video to these kinds of large sizes exaggerates flaws in the picture, and sticking with HD mitigates this problem. A dynamic iris is another feature to look for, as it gives video more contrast, making the whites brighter and blacks darker than is the case with a static iris.

### Things To Consider

Despite all the advantages a front-projector provides, there are several caveats to consider. A standard projector lamp burns out eventually and

can be expensive to replace, so go in knowing you'll eventually need to replace it. Images can also wash out if there is any outside light let into the room, so projectors work best in rooms where you have total light control. Finally, you need a separate sound system because most projectors don't have speakers, and those that do aren't adequate for most viewing because they are small and positioned behind your head.

Another downside to a front-projector? Finding enough seats for all the people who want to come over and watch movies. Be sure to budget for a lot of popcorn. **PG**

BY TRACY BAKER

### Projector Tidbits

- Projectors don't come with speakers, so you'll need a separate audio setup with sound as big as the picture.
- Get a projector that handles Full HD for sharp, clear video.
- There's nothing worse than throwing a movie party and having a lamp burn out halfway through the film. Keep a spare handy so you can swap it out and party on.



# Reliable Power

## Save Devices From Power Surges & Power Failures

**T**he greatest risks to electronics are, oddly enough, electrical power surges and power failures. Power surges can overwhelm the internal circuitry in your HDTV with electricity, rendering the hardware useless. And a sudden shutdown during a power failure can also damage processors and hard drives, which are found in many home-theater components, such as DVRs and home-theater PCs. A UPS (uninterruptible power supply) can help you avoid electrical issues that can ruin or damage your home electronics.



### Overload Protection

UPSes feature a joule rating, which is a measurement of the amount of watts the UPS can absorb for one second before it will allow excess power to reach your electronics. The higher the joule rating, the greater the power surge a UPS can handle. For example, a UPS with a 500-joule energy rating may be able to handle a spike from an indirect lightning strike, but a strong lightning strike may overpower the unit.

If an electrical surge ruins your components, many UPS manufacturers include connected-equipment warranties, so you can have them replaced at no cost to you.

### Power Regulation

Fluctuations in the voltage running to your electronics can reduce their life spans. UPSes with an AVR (automatic voltage regulator) ensure that each

component receives continuous, steady power. An AVR-enabled UPS is especially handy for home-theater owners, because the AVR can filter out electromagnetic interference that spreads through cables and might degrade picture and sound quality.

### Backup Power

UPSes include a built-in battery that is designed to keep your hardware running for a limited amount of time so you can properly shut it down during a power

outage. The time the devices will be able to run may be anywhere from a few minutes to one or two hours, depending on the amount of watts stored by the battery and the amount of power required by the devices connected to the UPS. Some UPSes even include software that you can install on your PC, so that you can manage power and receive text alerts to your phone when there's trouble.

Most electronics feature wattage power specifications displayed on a sticker near the cord. Before you select a UPS, add up the amount of watts the UPS will need to power, because an underpowered unit may short out or not deliver power to all of the devices in your home-theater setup. Note that the UPS product tag may list a VA (volt amp) rating, and, if so, you'll need to check the UPS' manual for the total amount of wattage it supports. **FG**

### UPS Principles

- Protects your electronics from power surges.
- Provides consistent, interference-free power to your devices.
- Delivers backup power to let you properly shut down home-theater hardware.

BY NATHAN LAKE

# Pump Up The Volume

## A Wireless Music System Sets Your Songs Free

**Y**ou no longer bother with CDs anymore.

Instead, you simply pick up a remote, dial up a genre of songs, such as jazz, and kick back on the couch. If you would rather hear music by a particular artist or group, such as Meiko, it's no problem. And if you don't really care what you listen to at the moment, start a random playback of all the tunes you own.

A wireless music system lets you bridge the gap between the tunes on your PC and your home stereo or surround-sound system.

The success of the iPod has made it common practice for more and more of us to "rip" music from our CDs, or convert it to song files on our computers' hard drives, before we sync it with our MP3 players. Of course, that means that our laptops and desktops may accumulate thousands of songs over time. (It also means that you can box up your expensive CDs and store them in the closet, where they'll never get scratched.)

With a wireless music system, you can turn your PC or Mac into a remote-controlled jukebox with its speakers in an entirely different part (or parts) of the house. You can set it up in the backyard with kids' music on a boom box for a child's birthday party or play some big band tunes as a backdrop for Grandma and Grandpa's anniversary dinner. The remote can even take a late-evening house party up a notch, as guests can take turns adding songs to the playlist.

### What You'll Need

We've mentioned that you'll need to supply a few items, such as a computer with music files on it, a stereo or set of powered speakers, and a network router with support for 802.11g and perhaps other popular wireless protocols, such as 802.11n. (Wireless support is optional for some network music systems.)

Typically, a wireless music system has three or four components. A **remote** with a screen lets you choose the songs, play-list, or station you want to hear. One or more **receivers** connect to your stereo(s) with audio cables and to your router or a **transmitter** wirelessly (or with an Ether-net cable, although this precludes the "wireless" part of "wireless music system"). Finally, some included **player software** runs on your

computer and gives the music system access to your music.

You're not limited to your own tunes, of course. Most wireless music systems also can access online radio stations and certain music streaming services, such as Pandora ([www.pandora.com](http://www.pandora.com)) and Rhapsody ([www.rhapsody.com](http://www.rhapsody.com)). Still others can access your personal online music collection stored on a service such as MP3Tunes.com. In fact, some systems let you listen to music on the Internet without even turning on your computer.

After some setup to get your wireless music system working with your network, you'll be able to enjoy all of your music anywhere in the house. Doesn't that sound nice? **FG**

BY MARTY SEMS





# Make The Connection

## Hook Up Your HDTV To The HD Sources It Needs



After you've bought a shiny, new HDTV, it's time to consider your high-definition programming options. Although your HDTV will be more than capable of displaying SDTV (standard-definition television), it will really show its stuff when it's connected to one of three HD sources.

### OTA

In some areas, HD programming is offered free as an OTA (over-the-air) broadcast. Most major networks broadcast HD signals that you can receive with an ATSC antenna, which is likely to be integrated in new HDTV models. Depending on how far you live from the transmitter and how many signal-blocking obstructions exist, OTA may be the quickest and most affordable way for you to connect your HDTV to the HD programming it's designed for.

**Things to know.** As part of the migration to HD, most local broadcasters are required to make their programming available as unencrypted OTA broadcasts. Also, OTA broadcasts are immune to some of the signal problems that plague SDTV broadcasts such as snow and jittering. Instead, your HD signal will either come in, or you'll see a black screen.

### Satellite/Cable

Cable and satellite providers were some of the first pioneers in providing HD content with trailblazing programs, such as HDNet. Depending on your provider,



you may be able to access dozens of HD channels at an affordable cost.

**Things to know.** Don't make the mistake of thinking that digital cable will automatically provide you with an HD picture. Most cable companies have migrated from analog cable to a digital system to increase the number of channels they can offer you. You'll typically need to subscribe to an HD package to receive HD programming.

Receiving an HD signal will usually require a digital set-top box or HD satellite receiver from your provider. Cable and satellite companies often lease these devices for nominal fees. In addition to the set-top box, you'll need either an HDMI cable or a set of component cables to connect your HDTV to the set-top box.

### Blu-ray Discs

BDs (Blu-ray Discs) are starting to supplant DVDs as the medium of choice for disc content. BDs are small optical discs that store movies with elaborate bonus features in the finest of HD and surround-sound audio quality. Imagine all the features you've become accustomed to with DVD, then double the picture and audio quality; that's what BDs offer.

**Things to know.** In order to watch BD content, you'll need a Blu-ray Disc player. And, to ensure that you're watching your BD movie in true HD, the disc player will need to be connected to your HDTV with an HDMI cable. Other cables, such as Component cables, won't deliver the high-definition video quality that BDs have to offer. **REG**



# Furnish Your Home Theater

## Dress Your Media Room For Success

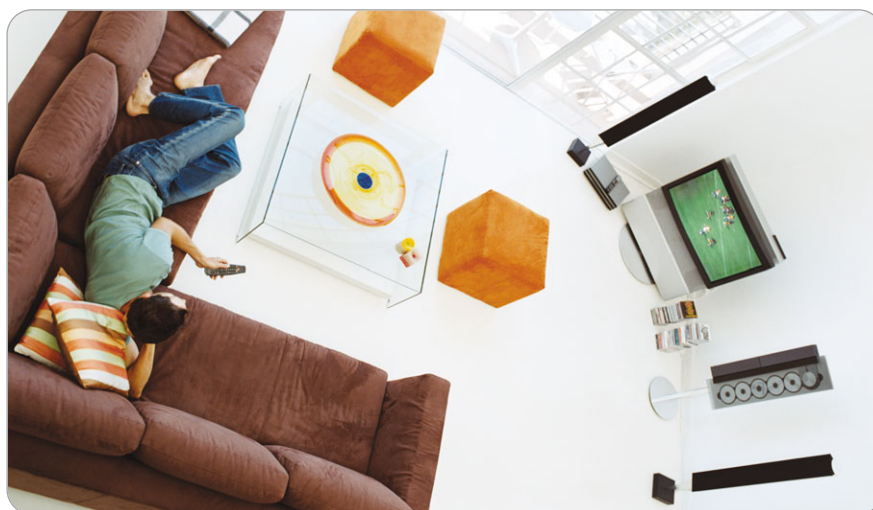


You carefully researched and then purchased your ideal home-theater system, and now you have a great combination of components to entertain friends with or enjoy on your own. But to really make the most of your investment, consider furniture that complements your home-theater system and your media room. With the right TV stand, comfortable seating, and a place to store your media collection, you can take your home theater to the next level.

### A Strong Foundation

Pairing your HDTV with the right TV stand is key, because the stand you purchase must be compatible with the size and weight of your HDTV. Also look for features that add ease to your home-theater setup: Many TV stands are designed to manage multiple cables, so you can figure out which cord belongs to each device. This makes it easy to add or subtract components such as BD players, speakers, and game console, from your home-theater configuration.

Mounting an HDTV on the wall is a great option for those who don't have the space necessary for a TV stand. Full-motion mounts can angle your TV in any direction and let it extend toward and away from the wall, so you always have a great view of the screen. Tilting mounts angle up and down to help avoid glare from sunlight. Low-profile mounts will position your HDTV almost flush against the wall for an understated appearance, but they do not offer any movement.



### Store It In Style

You don't have to pile BDs (Blu-ray Discs), DVDs, and CDs next to your HDTV or hide them in a closet. Media towers and shelving units come in a variety of sizes and colors so you can find a solution that works with the dimensions of your media room as well as the décor. And because the cases your discs come in are different sizes, some media towers offer adjustable shelves, so you can customize your unit for your collection and maximize the amount of space it offers.

### Furniture Fun

- Be sure your TV stand or mount is compatible with the height and weight of your HDTV.
- Consider media storage with adjustable shelves to accommodate your entire media collection.
- Comfortable seating helps you relax and enjoy movies or video games.

### Sit Back & Enjoy The Show

To really kick back and relax in your media room, you need to have comfortable seating. Recliners and modular furniture are available with cup holders in the armrests for the full cinematic experience during family movie night. Additionally, you can find seating with spill-resistant upholstery to keep it looking like new.

Gamers can also find seating that meets their specific needs. Gaming chairs are designed to keep you comfortable throughout long sessions, and some even have built-in speakers to help you feel as though you're right in the middle of the action.

### Experience It All

Adding furniture that complements your home-theater system and media room ensures you will enjoy watching every movie, sitcom, and game, whether you're by yourself or with a crowd. **FG**

BY TESSA WARNER BRENNEMAN



# No More Wires

## Conceal Home-Theater Wires & Components

**S**o, you love the look of your sleek HDTV but not of the cables? Luckily, there are several options for concealing those wires and keeping the area around your home-theater system as stylish as the components themselves.

### In-Wall Cable Installation

Cables can be concealed by running them through the wall behind (or below or above) your home-theater system. Your best bet is to check with an electrician, as there may be local codes you must follow. If construction on the room is not complete, you can plan your system, making note of the wires you would like to hide in the wall. Holes can be cut in the drywall in the exact place where you'll want your home-theater cable wires to go.

If you're working in a finished room, you'll need to determine where you want your home-theater system, and then map out where you want the wires to go. Once your plan is in place, cut holes in the drywall and feed the wire from component to component. Measure the amount of cable you'll need to connect your components, and then purchase at least 25% more. Use only wall-rated cable and purchase ties or wire management products to keep the wires tidy. Once the wires are installed and you've tested the system, install wall plates to cover the holes. Wall plates are similar to the plate covering a wall light switch—they come in different sizes, materials, and colors. Choose the one that best fits your décor.

### Wireless Speakers

For a great surround-sound audio setup without unsightly wires running from your receiver to your speakers across the floor or under the carpet, consider wireless speakers. They take just moments to install and still provide great sound. Most feature a transmitter that plugs into your home-theater system and speakers that can be placed anywhere in the room. The transmitter sends audio to the speakers wirelessly. You'll want to measure your room so that you get a transmitter with a strong enough signal for your desired speaker placement.

### Powerline Adapters

You can avoid stringing Ethernet wires to your home theater for an Internet connection with the use of a powerline adapter. Powerline adapters wirelessly connect your PC, game console, Slingbox, or network storage and enable you to watch the movies you've downloaded to your computer or play high-definition games. Your purchase will include a set of two adapters. Each plugs into a regular electrical outlet, allowing you to transfer documents,



photos, games, audio, video, and voice files from your PC. The adapters support multiple streams of high-definition media, giving you a spectacular media experience.

### TV Stands & Cabinets

Consider an attractive cabinet or stand for some or all of your HT components. Most newer furniture pieces have wire management systems built in, letting you feed wires through holes, thereby eliminating an unsightly mess. Be sure to purchase wire ties to help keep the wires organized and labels to clearly identify which wire goes where. **FG**

BY GWEN HURST ANDERSON

## Top Tips

- Conceal cables in the wall behind your home-theater system.
- Set up wireless speakers, measuring your room first so you'll know the distance between the transmitter and receiver.
- Plug in powerline adapters into regular electrical outlets and immediately gain the ability to transfer all forms of media from computer to home-theater system.
- Conceal your wires and cables in an attractive TV stand or cabinet, making sure to tie the wires to keep them organized.

**FirstGlimpse**

# Yes, You Need To Calibrate

## Get Optimal HDTV Video Results

**T**he HDTV is the center of attention in any home-theater setup. To ensure that it is providing the best video results, consider a professional HDTV calibration.

### Your Video May Not Be All That It Seems

While every HDTV owner is unique, the display settings on an HDTV may not be. If you want to ensure lifelike image quality for your HDTV, you'll need a professional to perform a calibration.

- Most TVs are shipped with a set standard video mode meant for an electronics store display—this means that the TV's settings are adjusted to show the best picture in a bright, fluorescent-lit environment. Because it's unlikely your lighting at home matches the store's surroundings, you should have your TV professionally calibrated by an ISF (Imaging Science Foundation)-certified specialist to

accommodate your home's unique lighting environment.

- An HDTV's viewing angle and your home-theater setup also affect how your HDTV should be calibrated. An ISF-certified professional takes these factors into account when making adjustments.
- Although you can expect to budget 10 to 15% of the purchase price of your television for a professional calibration, consider it an entertainment investment that will pay dividends for years to come.

### Why A Professional Calibration?

Instead of taking a chance with your HDTV investment, rely on professionals to handle the work for you.

- Calibration specialists are ISF-certified, which means they are trained to use highly specialized and expensive equipment to calibrate HDTVs correctly.
- A calibration DVD might be a tempting alternative, but it won't let you adjust all of your HDTV's settings. An ISF-certified professional can access advanced service menus to calibrate your TV correctly. These settings

aren't meant to be experimented with, so if you poke around and gain access to your TV's service menu, it's best to leave it alone. Many customers have rendered their TVs useless because they didn't know which settings they were changing.

- Calibration DVDs only adjust video settings for your HDTV's DVD input. This means when you're watching video from a source other than a DVD, your picture won't be calibrated. A professional calibration takes care of two source inputs, such as your DVD player and cable box inputs.

### What You Can Expect

An in-home calibration service will typically last about two hours and includes the following:

- A professional will use color analyzer equipment to objectively tune color saturation and temperature as precisely as possible, letting you see video exactly the same way it looked when it was created.
- Your HDTV's contrast will be set up to provide greater video detail as well as the darkest blacks and brightest whites.
- No matter which calibrated source input you are using, you will enjoy the best image clarity and sharpness that your HDTV can provide. **FC**





# Essential

## THINGS TO KNOW

### WIRELESS SPEAKERS

#### Q What is the difference between regular speakers and wireless speakers?

A Traditional speakers are connected to an A/V receiver with wire whereas wireless speakers communicate with a wireless transmitter that's connected to your A/V receiver.

#### Q What are the benefits of wireless speakers?

A You can place wireless speakers anywhere in your home theater and move them around at will, without needing to route wires around the room or conceal them when you're done.

#### Q Are there HTBs (home theater in a box) that are wireless?

A Yes and no. You may be able to buy a wireless HTB, but not all of the included components will be wireless. Generally, only the rear speakers and/or the subwoofer are wireless, as they are most often placed a distance away from the A/V receiver.

#### Q Can I purchase wireless speaker components individually?

A Yes. Wireless speakers, subwoofers, and sound bars can be purchased separately and pieced together to create the ultimate surround-sound system. Just be sure that each component you purchase is compatible with the other components in your setup.

#### Q How do I set up a wireless speaker set?

A Because not all the speakers in your wireless speaker set will be wireless, you may have to connect some wires to your A/V receiver and your wireless transmitter.

Wireless speakers with a built-in receiver will automatically receive an audio signal from your wireless transmitter.

#### Q How do wireless speakers work?

A A compatible wireless transmitter connected to your A/V receiver or a built-in wireless transmitter streams an RF (radio frequency) or IF (infrared frequency) audio signal to a wireless receiver located inside each speaker.

#### Q How much do wireless speakers cost compared to traditional speakers?

A Because of the wireless technology, wireless speakers generally cost more than traditional speakers, ranging from \$100 to \$500. But the benefit of placing your wireless speakers anywhere in the room typically outweighs the extra cost.

#### Q What's the difference between purchasing single wireless speakers and a home-theater audio system with wireless speakers?

A If you buy wireless speakers individually, you'll also need to purchase an A/V receiver and a wireless transmitter. A complete home-theater audio system is typically wired, but integrates a receiver and wireless transmitter.

#### Q What are the drawbacks of using wireless speakers?

A In some cases, wireless speakers can be susceptible to interference. Wireless speakers that use RF are less likely to have interference, however, because the audio signal can travel through walls and other objects.



# HDTV Glossary

**B** alderdash! OK, HDTV jargon isn't quite *that* bad, but there are a few terms that every shopper needs to know. Here is your cheat sheet.

**aspect ratio**—Put simply, it's the shape of the TV's screen. An HDTV has a wider picture than a traditional TV of the same vertical screen height. An HDTV has a 16:9 aspect ratio, meaning that if its screen were 16 inches wide, it would be 9 inches tall. A regular 4:3 TV screen would be 12 inches wide at the same 9-inch height.

**HDMI (High-Definition Multimedia Interface)**—A type of cable connection that carries both high-resolution video and uncompressed multichannel audio among HDTVs, home-theater receivers, and the other components required for your home-theater setup. HDMI cables maintain top picture and sound quality.

**HD tuner**—A built-in tuner for receiving local high-def broadcast TV channels. You won't need one if you have cable or satellite service. Some more expensive HDTVs include one, but separate HD tuners and antennas are available if your TV doesn't have one.

**interlaced**—When an HDTV displays an interlaced image, as in 1080i or 480i resolutions, it really shows you every other horizontal line of a frame of video (called a field) at a time. Sixty times a second, the TV displays the other field of the frame, or the lines not shown in the previous field. Interlaced video can appear to flicker or might cause moving objects on-screen to have blurred edges.

**LCD (liquid-crystal display)**—Like a notebook's screen, an LCD HDTV uses a

fluid crystal substance to form pixels of color in front of a backlight. LCDs may not be able to match plasma TVs' deep black and gray areas, but they're lighter, sometimes less fragile, and considered easier to set up. These work better in brighter rooms or if you will be playing unchanging images on the screen for an extended period of time.



**plasma**—Plasma TVs use a tiny tube of gas for each pixel, and electricity makes each pixel glow. Plasmas create deeper blacks and sometimes brighter colors than LCDs and have better contrast. These also offer slightly better viewing angles. However, older or less expensive models can also suffer from permanent screen damage if an unchanging image, such as a TV channel's stock ticker or parts of certain video games, is displayed too long.

**progressive scan**—A TV showing a progressively scanned image, as in 1080p or 720p resolutions, displays a full frame

of video (both odd-lined and even-lined fields) all at once. Progressive-scan video looks sharper than interlaced does and doesn't flicker.

**projection**—Some large-screen HDTVs offer lower-priced alternatives to LCDs or plasmas by using projection technologies. These technologies vary, but all

projection TVs throw light on a screen from the front or rear. This means they are bulkier than plasmas or LCDs, but some sets have stellar picture quality.

**viewing angle**—No matter where you sit in front of an HDTV with a wide viewing angle, such as 170 degrees, its picture should look reasonably good. Test this before you buy.

**widescreen**—A TV or monitor that's wider horizontally in relation to its vertical height. HDTVs typically have a 16:9 aspect ratio rather than an older 4:3 display. **EG**



# HDTVs

## Screen Technology Differences



### LCD (liquid-crystal display)

LCDs can use one of two backlight technologies. CCFLs (cold cathode fluorescent lamps) are the most common, but LEDs are the latest backlight technology to hit the LCD scene. (See the “LED” section for more info on LED TVs.)

#### Pros

- The thin profiles and light weight of LCDs make them easy to mount on a wall.
- Power demands are a bit lower than comparably sized plasma displays and considerably lower than CRT televisions.

#### Cons

- Fast-moving images may suffer from a slight trailer effect, but with improved

LCD technology, the effect is barely perceptible.

- When pixels stick on or off, they show up as either a pinpoint of bright light or black, which can be distracting on-screen.
- From certain viewing angles, LCDs will lose video contrast and color.
- LCDs with CCFL backlighting suffer from leaking light, and unlike LEDs, they can't dim certain areas on-screen. This may result in blacks and whites that appear to be more gray in color.

#### Best For

- Streaming PC content
- Bright, sunny rooms

### LED (light-emitting diode)

LED TVs are actually a type of LCD TV. These sets use one of two LED backlight technologies:

- Full-array lighting places LEDs behind the screen in a grid pattern, letting the TV dim certain LEDs for the best contrast ratios available.
- Edge-lit sets have LEDs placed around the frame of the TV, and light is directed toward the center of the screen. Edge-lit models cost less than full-array sets and are a lot thinner.

#### Pros

- By using LEDs, these sets use a lot less electricity than other HDTVs, and

they don't contain harmful mercury.

- Overall, LED TVs are one-third thinner than other LCD TVs and have longer life spans.
- Plasmas are well-known for their deep blacks and crisp whites and fast response times, but LED TVs closely match in performance.

#### Cons

- These sets are costly because they feature a relatively new technology.
- Blooming, or a halo effect, may encircle bright images that are on dark backgrounds.

#### Best For

- Eco-conscious viewers
- Fast-paced gaming

### Plasma

#### Pros

- A plasma TV's phosphors light up evenly across the screen to create images, which are consistently bright and clear with vibrant colors.
- The contrast ratio is high, so you'll see some of the darkest blacks and brightest whites.

- The design and technology of plasma TVs lend themselves to large screen sizes—typically 50 inches or greater.
- Rapid pixel response means no blurry motion.
- Wide viewing angles give you the same high-quality images on-screen no matter where in the room you happen to be sitting.

#### Cons

- Some plasmas are susceptible to image burn-in if not cared for properly.
- Low air pressure and high altitudes may cause plasmas to buzz.
- Some plasmas have highly reflective glass, which isn't ideal in sunny settings.

#### Best For

- Large groups who watch TV together
- Movies or sports with nonstop action

### RPTV (rear-projection TV)

#### Pros

- RPTVs are surprisingly lightweight for their sizes.
- You'll find exceptional picture quality on very big screens (65 inches and larger).

- As screens get bigger, RPTVs tend to be more cost-effective than an LCD, LED, or plasma TV.

#### Cons

- With depths of 16 to 24 inches, these TVs are far too big and bulky to mount on a wall.








- RPTVs require lamp replacements every few years.

#### Best For

- Anyone who wants to bring a cinematic experience home
- Big, roomy home theaters

## Which LCD TV Is Best For You?

So you've decided to get an LCD TV. The next step is deciding *which* LCD TV to invest in. With all the models on today's market, you want to be sure the model you select is the best for you and your family. Refer to this chart for further help when shopping.

		Size	Dimensions; Weight***	Native resolution	Viewing angle	Inputs	Outputs	Refresh rate**
What It Means		The diagonal measurement of the TV's screen	Height x width x depth; how much the TV weighs	A fixed TV resolution; images are best displayed in the native resolution	The maximum angle at which the viewer can see the screen clearly	Inputs let you connect your components to your TV	Outputs transfer information from your TV to peripherals, such as audio to speakers	Speed at which a screen is redrawn every second
	<b>Insignia NS-L46Q120-10A</b> MSRP: \$799.99* SKU 9554519	46 inches	31x44.3x12.3 inches; 44.1 pounds	1080p	n/a	4 HDMI; 2 S-Video; 2 Component; 2 Composite; 1 PC; 1 RF	1 audio	120Hz
	<b>Panasonic VIERA TC-L42U12</b> MSRP: \$899.95* SKU 9239228	41.6 inches	26.3x40.5x4.4 inches; 64 pounds (with stand)	1080p	178 degrees	3 HDMI; 1 S-Video; 1 Component; 2 Composite; 1 PC; 1 RF	1 audio	60Hz
	<b>LG 42LH50</b> MSRP: \$1,699* SKU 9321637	42 inches	25.9x41.4x3.6 inches; 37.9 pounds	1080p	178 degrees	4 HDMI; 2 Component; 2 Composite; 1 RF; 1 USB	1 audio	120Hz
	<b>Samsung LN46B750</b> MSRP: \$2,399.99* SKU 9298431	46 inches	27.3x43.8x3.1 inches; 43.4 pounds	1080p	178 degrees	4 HDMI; 2 Component; 2 Composite; 1 PC; 1 RF; 2 USB	1 audio	240Hz
	<b>Sharp Aquos LC-52LE700UN</b> MSRP: \$2,499.99* SKU 9514153	52 inches	30.1x48.7x3.7 inches; 50.7 pounds	1080p	176 degrees	4 HDMI; 1 S-Video; 2 HD Component; 2 Composite; 1 RS-232C; 1 PC	4 audio	120Hz
	<b>Mitsubishi LT-46249</b> MSRP: \$2,799* SKU 9427211	46 inches	28x42x3 inches; 68.6 pounds	1080p	N/A	4 HDMI; 3 Composite; 3 Component; 1 RF	2 audio	120Hz
	<b>Sony Bravia KDL-52XBR10</b> MSRP: \$2,899.99* SKU 9528237	52 inches	29.3x49x3.3 inches; 57.1 pounds	1080p	178 degrees	4 HDMI; 1 S-Video; 2 Component; 2 Composite; 1 PC; 1 RF; 1 USB	1 audio	240Hz
	<b>Sony Bravia KDL-46XBR8</b> MSRP: \$3,699.99* SKU 8996508	46 inches	27x49.6x5.7 inches; 71.6 pounds	1080p	178 degrees	4 HDMI; 1 S-Video; 2 Component; 1 PC; 1 USB; 1 SD	1 audio	120Hz









\*Prices listed in this issue are for general reference and may vary from retailer pricing.

\*\*\*Unless specified, this is without stand

\*\* Comparing refresh rates between plasma and LCD TVs is like comparing apples to oranges. For more in-depth information about refresh rates, please ask a sales associate.

## Which Plasma TV Is Best For You?

If you're planning on buying a plasma HDTV, it might be hard to decide on one just by looking at a wall of gorgeous sets. Refer to this chart for further help when shopping.

		Size	Dimensions; Weight***	Native resolution	Viewing angle	Inputs	Outputs	Refresh rate**
What It Means		The diagonal measurement of the TV's screen	Height x width x depth; How much the TV weighs	A fixed TV resolution; images are best displayed in the native resolution	The maximum angle at which the viewer can see the screen clearly	Inputs let you connect your components to your TV	Outputs transfer information from your TV to peripherals, such as audio to speakers	Speed at which a screen is redrawn every second
	<b>Insignia NS-P42Q10A</b> MSRP: \$599.99* SKU 9299822	42 inches	26x41.5x3 inches; 54.2 pounds	720p	160 degrees	2 HDMI; 1 Composite; 2 Component; 1 RF	2 audio	600Hz
	<b>Samsung PN42B450</b> MSRP: \$799.99* SKU 9235259	42 inches	26x41.6x2.9 inches; 61.3 pounds	720p	N/A	3 HDMI; 1 Composite; 1 PC	N/A	600Hz
	<b>Panasonic VIERA TC-P42U1</b> MSRP: \$849.95* SKU 9244301	42 inches	26.1x40.6x4.2 inches; 55.2 pounds	1080p	N/A	3 HDMI; 2 Composite; 2 Component; 1 S-Video	N/A	600Hz
	<b>Panasonic VIERA TC-50PS14</b> MSRP: \$1,399.99* SKU 9708761	49.9 inches	30.3x48x15.3 inches; 72.8 pounds	1080p	N/A	3 HDMI; 2 Composite; 2 Component; 1 S-Video	1 audio	600Hz
	<b>Samsung PN50B860</b> MSRP: \$2,199.99* SKU 9301141	49.9 inches	29.6x48.7x1.2 inches; 57.5 pounds	1080p	N/A	4 HDMI; 2 Component; 1 Composite; 1 PC; 2 USB	N/A	600Hz
	<b>Samsung PN58B860</b> MSRP: \$3,199.99* SKU 9300687	58 inches	33.6x56x1.4 inches; 81.3 pounds	1080p	N/A	4 HDMI; 2 Component; 1 Composite; 1 PC; 2 USB	N/A	600Hz
	<b>Pioneer KURO PDP-6020FD</b> MSRP: \$3,999* SKU 8867871	60 inches	34.5x57x3 inches; 112 pounds	1080p	N/A	4 HDMI; 1 Component; 3 Composite; 1 S-Video	2 audio	N/A
	<b>Panasonic VIERA TC-P65V10</b> MSRP: \$3,999.95* SKU 9396496	64.7 inches	38x61.9x3.9 inches; 134.5 pounds	1080p	N/A	4 HDMI; 2 Component; 2 Composite; 1 S-Video; 1 PC	2 audio	600Hz

\*Prices listed in this issue are for general reference and may vary from retailer pricing.

\*\*\*Unless specified, this is without stand

\*\*Comparing refresh rates between plasma and LCD TVs is like comparing apples to oranges. For more in-depth information about refresh rates, please ask a sales associate.



## NOTEWORTHY

# Accessories & Services

As you head toward the HDTV section of your local consumer electronics store, you'll invariably pass shelves of bland-looking HDTV accessories. There are a handful of accessories that are vital to getting the most from your HDTV. The following is a rundown of accessories we recommend to complete your home-theater setup. **CE**



## WALL MOUNTS & BRACKETS

- View your HDTV from the best possible angle
- Adjust your TV's position by tilting it up or down as needed
- Maximize space in your viewing room by hanging up your TV



## CLEANING KIT

- Protect your HDTV's screen by using specially formulated sprays and cloths while cleaning it
- Eliminate the danger of scratching delicate screens
- No-drip formulas prevent damaging other home-theater equipment



## UNIVERSAL REMOTE CONTROL

- Simplify your home-theater setup with one remote that can control all of your components
- Program different functions so that you will be able to, for example, watch a movie by pressing just one button
- Easily view options in the dark with a backlit LCD



## SURROUND-SOUND SYSTEM

- Maximize your HDTV experience with theater-like audio
- Feel like you're in the movie scene instead of just watching it
- Even out softer and louder programming with an equalizer



## CORD-CONCEALMENT KIT

- Hide multiple cords while keeping them organized
- Minimize cord clutter, especially with wall-mounted sets
- Keep the focus on your new HDTV, not the cords connected to it



## TV STANDS

- Offer flexibility if you're unable to mount your HDTV on the wall
- Available in a variety of finishes to match any décor
- Provide a place for additional home-theater equipment



## SURGE PROTECTORS/POWER CONDITIONERS

- Protect your home theater from potential damage by using a surge protector that will absorb electrical fluctuations
- Filter out "dirty power" (also known as electrical "noise" or radio interference) that can degrade your home theater's audio and video with a power conditioner
- Have peace of mind knowing that your home theater will give you its peak performance for the longest amount of time



## HOME-THEATER SERVICES

A home theater is a pretty big investment, so it's wise to consider letting a professional handle your installation and setup. Let your local CE retailer tackle the following tasks, and you'll be able to enjoy the full glory of HD in no time.

- Home Theater In-Home Consultation
- TV Recycling
- TV Calibration
- TV Mounting & Cord Concealment
- Remote Control Programming
- Speaker Setup



## HDMI CABLES

- Carry uncompressed digital audio and video signals to and from your HDTV and its components
- Eliminate interference from other components with shielding found in higher-end models

**CASIO®**  
GREEN SLIM  
PROJECTOR

## Eco-Friendly & Larger-Than-Life Images HD Projector



### Casio XJ-A140 Green Slim Projector

MSRP: \$849.99

SKU: 9820826

[www.greenslimprojector.com](http://www.greenslimprojector.com)

#### Quick Overview

Casio's Green Slim Projector features a revolutionary new patent-pending hybrid light source. Both earth-friendly and low-maintenance, the Green Slim uses laser and LED light technology to produce bright pictures and can last up to 20,000 hours. With its built-in 2X Power Zoom, you'll be able to project large screen images in any setting, whether you're delivering a boardroom presentation or relaxing in your home theater.

#### Perfect For

Those who want a bigger screen experience than flat-panel TVs can now project up to 100 feet for a true gaming or home theater experience.

#### Outstanding Benefits

- Casio's patented hybrid "Solid-State" light source
- 2X Power Zoom lens easily projects large images (over 100") in any room
- DLP display technology from Texas Instruments, XGA Resolution
- Connectivity — Computer, Component video, HDMI
- DTV/HDTV compatibility — 480i/480p/720p/1080i/1080p
- Long life — virtually maintenance free (at 5 hrs/day will last up to 11 yrs)
- Consistent brightness and color — virtually no loss of brightness over the Green Slim's life
- Eco-Friendly — mercury and lead free — reduces harmful metals in the environment

#### Coollest Feature

Slim and compact in design, the Green Slim incorporates a 2X Power Zoom lens, which projects large images in any room.

HOW TO BUY

# Memory Cards

## Don't Be Overdrawn At The Memory Bank

**Y**ou're busy, so let's just jump in with some memory card facts you might not be as familiar with. We'll get right into their speed ratings, their wireless capabilities, and...

Their *what*, you ask? Their *wireless capabilities*? See, we told you there might be a few surprises ahead. Let's get right to them and follow up with some card basics afterward.

### Performance

The first thing to know when buying memory cards is that not all are created equal. To be sure, they do all meet the basic criteria for removable flash memory storage media, which is to store data such as photo and video files from your digital camera. That said, there's quite a difference in the performance of entry-level cards sold at commodity prices and high-end cards targeted toward professional photographers.

If you're shopping for a flash memory card for a digital camera, the key thing to look for is its Class number, such as Class 6. This tells you how fast the card can save photos, video clips, and other files in megabytes per second. For instance, a Class 6 card can store data at 6MBps, which is pretty fast.

A fast memory card can speed up your camera's ability to take second, third, and other photos after the first. That's an

Eye-Fi Share Video 4GB Wireless  
Secure Digital Media Card  
\$79.99  
[www.eye.fi](http://www.eye.fi)

improvement you'll seriously appreciate when you're taking photos of a friend who is finishing her first marathon and jogging swiftly by. Many users find that their slowpoke digital cameras feel much livelier when they pop in a faster card. Of course, for less demanding devices such as digital photo frames, a cheaper, slower card will perform just as well.

### Wi-Fi

Another lesser-known trait of memory cards is the fact that an elite few of



them such as those from Eye-Fi (\$39.99 and up; [www.eye.fi](http://www.eye.fi)) can not only hold your files but can also (after a bit of setup) automatically upload your pictures to a computer and/or a Web site over a specific wireless network. For instance, a wedding photographer can snap image after image, safe in the knowledge that his RAW image files are being wirelessly replicated on his nearby laptop. A young socialite, on the other hand, can update her Facebook, Flickr, or other online service account as she takes pictures of guests at her birthday party.

### Basic Details

Other items you should know about memory cards are a little less, um, flashy. They come in different types, such as SDHC (Secure Digital High Capacity), as well as in variants with different physical sizes, such as microSD. But before you buy any memory card, check the users manual of your mobile device for compatibility, even if the card should fit.

Finally, memory cards are marketed according to their capacity in gigabytes, such as 4GB, 8GB, or 16GB. The more a card can hold, the more photos you can snap, so buy accordingly. **FG**

BY MARTY SEMS

## Memory Card Mementos

- The higher a memory card's speed rating number, such as Class 6, the faster you can take follow-up photos.
- Some specialty cards let you wirelessly fling your photos to a PC's hard drive or online sharing site.
- Choose the type of card your device requires and double-check its compatibility.
- The more gigabytes of data a card can hold, the better.



# SanDisk's Ultra II SDHC Memory Cards

## Memory That Matters

If you're buying a new point-and-shoot digital camera, you'll be happy to know that more digicam makers are including the ability to record HD video that you can use many ways, including playing it back in your home theater with an HDTV. A noteworthy obstacle to shooting video, however, is that the resulting files can require lots of fast, dependable memory to ensure smooth, error-free playback. To tackle such requirements, SanDisk's ([www.sandisk.com](http://www.sandisk.com)) Ultra II SDHC series of rugged, high-performance memory cards are created specifically for digicam and camcorder use.

## Get Adequate Speed & Space

4GB Ultra II SDHC  
SKU: 8304541



8GB Ultra II SDHC  
SKU: 8554806



16GB Ultra II SDHC  
SKU: 9142171



How Much HD Video You Can Record At 24Mbps	4GB	8GB	16GB
	20 minutes	40 minutes	1 hour and 20 minutes
Read/Write Speed Rating	4MBps	2MBps	2MBps
Number Of 5MP Photos You Can Store	2,400	4,800	9,600
Number Of 8MP Photos You Can Store	1,600	3,200	6,400
Number Of 10MP Photos You Can Store	1,200	2,400	4,800
Number Of 12MP Photos You Can Store	1,000	2,400	4,800

## Highlights Of SanDisk's Ultra II Cards

- Perform reliably in widely ranging temperatures
- Provide the space to store thousands of photos or hours of HD video
- Offer the sustained speed to record error-free HD video

### Speed & Precision

Whether you're recording a daughter's ballet recital or footage during a charity ball, the memory card storing your memories should enhance the process, not hinder it. SanDisk's cards record data quickly so you're always ready to capture the action yet to come, and they also accurately write video to memory so it doesn't visually hiccup during playback. Further, with a 15MBps read speed, SanDisk's cards won't keep you waiting on slow transfers from your camera to computer. And because so many digicams and camcorders support the SD memory card format, a SanDisk Ultra II SDHC card will work among numerous devices.

### Ready For HD

To fully enjoy all the playback of your HD video, you need a memory card that can sustain a proper recording speed so that it flows seamlessly without dropped frames or other errors. A SanDisk Ultra II SDHC card that carries a Class 4 rating means it can read and write data at a minimum of 4MBps, the amount typically required to capture unproblematic HD video.

### Storage To Spare

The last thing a father needs on his daughter's first day of kindergarten is to discover his digicam's memory card is out of room just as she's walking into her new classroom. SanDisk's Ultra II SDHC cards scale up to 16GB, meaning you can shoot and keep on shooting without worrying about space constraints. To find the card that best suits your needs, consult the chart to the left.

# Enhancing Photos

## The Benefits Of Photo-Editing Software

**E**ven your best-looking photos could use a touch-up here or an adjustment there. We'll show you how some of the most common tools used in photo-editing software can help make your favorite pictures even more unforgettable.

### Remove Red-Eye

You've likely snapped several pictures where your subjects end up with monster red eyes. You might think that because of this, the pictures aren't worth saving. But with just a click, the red-eye removal tool available in photo-editing software can help you give your subjects a more natural-looking eye color.

The red-eye effect occurs when your camera's flash reflects off the back of your subject's eyes. Most photo-editing software features a paint brush, eye dropper, or crosshairs tool that you use to click over the red eye and replace it with a more realistic color. Some programs can even detect red-eye and remove it automatically, without you needing to first select each red eye.

### Adjust Brightness & Contrast

Even if you use your camera's flash, your picture may still come out too dark. This is often because the subject is too far away to be fully illuminated by your camera's flash. But you can easily enliven dark pictures by fine-tuning the brightness and contrast of a photo.

Adjusting the brightness of a picture will make it lighter or darker as a whole, while contrast affects the intensity of the lightest and darkest areas in a photo. In



most programs, you can adjust both by moving a slider to increase or decrease the photo's percentage of light and dark. The optimal brightness and contrast is determined by your preference, though your photos shouldn't look washed-out.

### Colorize Black-&-White Photos

You can use a photo-editing program to transform a colored photo into black and white, but you can further enhance it by also adding splashes of color.

Colorizing an item, such as a bride's wedding bouquet, puts emphasis on an important part of your photo and gives it an artistic flair. With most editing programs, colorizing requires you to select an item with a lasso tool and then change the color of the item with a paintbrush.

### Crop Your Photos

If you have a photo that's off-center or you want to remove someone's shoulder from the edge of the picture, you can use the crop tool included with any photo-editing software to cut out parts of the photo you don't want to see or to reframe a picture. Or, if the subject of your picture is too far away, you can crop out the edges and bring your subject closer.

Cropping is one of the simplest ways to edit a photo and is most often done by dragging the edges of a transparent box over the parts of a photo you want to keep, then selecting crop.

### Enhance Your Favorites

There's always room for improvement, so why not make your best pictures even more eye-catching with one of the many tools found in photo-editing software? **FG**

BY KRIS GLASER BRAMBILA

## Top Photo-Editing Tools

- Red-eye removal replaces your subject's red eyes with a more natural color.
- Fine-tuning the brightness and contrast in your pictures gives them a more dramatic and realistic quality.
- Colorizing areas of a black-and-white photo gives it an artistic style while drawing your eyes to an important part of the picture.
- Cropping your photos lets you create a new frame for your photo or get closer to parts of a photo that may be far away.

# Optical vs. Digital Zoom

## See The Difference



**T**he zoom lens is a wonderful tool. You can zoom out to capture a wide-angle landscape or zoom in and use the camera's telephoto capabilities to bring a distant subject even closer. When shopping for a point-and-shoot camera (as opposed to a DSLR), you'll notice that each camera features an optical zoom and a digital zoom. Before you get too enthusiastic about having the extra telephoto capabilities of a digital zoom, it's important to understand the difference between optical and digital zoom and how they affect image quality.

For both examples, we will imagine that we're taking pictures with a 5MP camera that is set to capture images at the highest quality level.

Optical zoom uses the camera's lens (optics) to magnify the view. When using only optical zoom, the camera will capture an image file containing 5MP of information. Because only the camera's lens is used to capture the full amount of megapixels, your image will be sharper and smoother than with digital zoom.

Digital zoom, which you can usually turn on or off in the camera's setup menu, engages when you've zoomed in as far as you can with the optical zoom. When looking at the camera's LCD or through the viewfinder, it appears that the camera is zooming in even more, but in reality, the camera has simply enlarged part of the image and cropped the rest. By cropping the image, the camera has discarded some of the image's pixels, leaving you with an image that contains far fewer pixels than one shot with an

optical zoom. For example, using our previous 5MP camera, we take a picture that engages digital zoom. The camera crops out 2MP of image data so the image file now contains only 3MP of image data. Because we're using a 5MP camera, however, the camera must produce an image with 5MP of data. In order to do this, the camera interpolates (invents) the missing pixels and adds them to the image file. The resulting image is almost always softer than the original, and individual pixels may be visible when the picture is enlarged.

So, when you're shopping for a digital camera, ignore the digital zoom specifications. And, for the best image quality and ability to make larger prints, use only the optical zoom when shooting. **FG**

BY THEANO NIKITAS



# SD vs. HD

## Comparing Digital Camcorders

### SD

(Standard Definition)

- SD camcorders are less expensive than HD camcorders, so you can get a high-quality camera for comparatively very little money. Some SD camcorders are available for less than \$200.
- Because SD camcorders record at a lower resolution than HD camcorders, you can fit much more video on any storage medium. Effectively, that means you can shoot more footage without having to offload the video to make room.
- SD camcorders can connect to PCs via USB or FireWire. This is handy because virtually all PCs have at least one of those two ports, meaning that you can transfer video to your computer with ease.
- There are several different media formats you can choose from for SD camcorders, including MiniDV tapes, DVDs and MiniDVDs, flash, and hard drive storage.

#### Best For

- Aspiring videographers on a budget.
- Anyone who needs to maximize storage on the given storage medium of his or her digital camcorder.
- Those who want to take advantage of the familiar USB or FireWire interfaces to transfer video to their PCs.

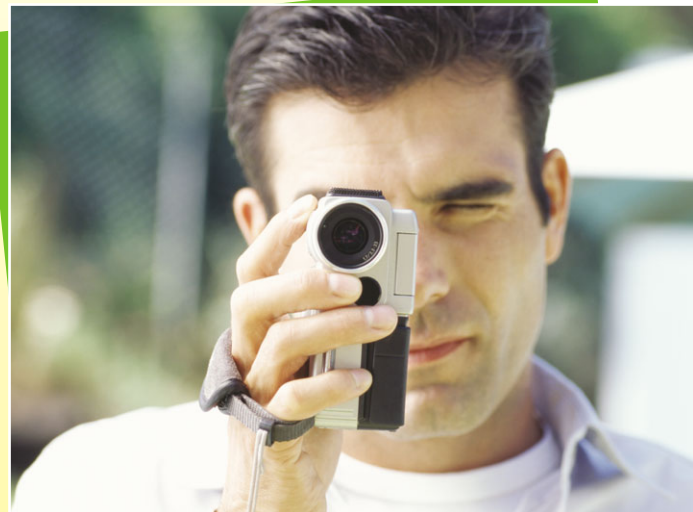
### HD

(High Definition)

- HD camcorders record at a high resolution, ensuring that the picture is clearer and sharper than that of an SD camcorder. Some models offer 1080p, which is the highest video resolution possible.
- Although HD camcorders are typically priced higher than SD camcorders, the prices continue to drop. Thus, HD camcorders are increasingly a great deal.
- An HD camcorder's HDMI port will let you connect it directly to your HDTV to play back your creations with a single audio/video cable.
- Thanks to HDMI, you'll experience faster video transfer speeds from your HD camcorder to your computer.
- Though some PCs have HDMI ports, many do not, so it can be slightly problematic to transfer video from the camcorder's HDMI port to a PC. You may need a different graphics card to get the HDMI connection on your PC.
- Because HD camcorders record video at a high resolution, the recorded footage takes up more space than SD footage, so you need a lot of storage capacity.
- HD camcorders are available in every video storage format, including MiniDV tapes, DVDs, flash, and hard drive-based.

#### Best For

- Techies who want the latest and greatest in digital camcorder technology.
- Videographers (amateur or professional) who want to capture memories at a high resolution.
- Those who want to easily and quickly transfer video to their PCs.



# Essential

## THINGS TO KNOW

### HD CAMCORDERS

**Q** What is the difference between an SD (standard-definition) camcorder and an HD (high-definition) camcorder?

**A** HD camcorders record video at a higher resolution than SD camcorders, making the picture quality of your recorded video sharper with more vibrant color. An HD camcorder will also complement a BD player and HDTV because you'll be able to play and watch your camcorder's footage in Full HD.

**Q** Will the sound quality of my video be better with an HD camcorder?

**A** The quality won't necessarily be better, but most HD camcorders will let you record multichannel digital audio. This will let you enjoy your video with surround sound on speaker systems that support it.

**Q** What video storage formats are available for HD camcorders?

**A** The different types of storage formats HD camcorders can record to include hard drives, flash drives, memory cards, DVDs, or MiniDV tapes. Some models can even record to more than one storage format, such as a flash drive and memory cards.

**Q** Do I need to purchase new video-editing software when I upgrade to an HD camcorder?

**A** It depends. Some video-editing programs can only edit SD footage, but other versions support both types of video. The key is making sure your software supports the HD file format your camcorder uses.

**Q** Will an HD camcorder always deliver better video quality than an SD camcorder?

**A** Not necessarily. A camcorder's video quality depends on more than just the camcorder's resolution; the lens, image sensor, zoom capabilities, and file compression technology also factor into the quality of the recorded video. Some SD camcorders are superior to HD camcorders in these areas, allowing them to produce better-looking video.

**Q** What's the difference between camcorders that have a 720 or 1080 resolution?

**A** Resolution is determined by the number of horizontal and vertical pixels (the smallest unit of a video clip) it offers. The more pixels a video clip has, the higher quality it is. Because 720 resolution produces 1,280 x 720 pixels, and 1080 generates 1,920 x 1,080 pixels (currently the highest video resolution available), a camcorder that offers 1080 resolution produces a superior video quality to those only providing 720 resolution.

**Q** Will I need special cables in order to connect an HD camcorder to my HDTV?

**A** Most HD camcorders include the cables you need to connect them to HDTVs. If not, most camcorders are compatible with an HDMI cable, which you can use to watch your HD content at its highest level of video quality.

**Q** What do I need to burn my HD home movies to disc?

**A** Your computer will need an optical drive that is capable of writing content to BDs (Blu-ray Discs). Updated versions of Windows XP and Windows 7 won't require additional software to create BDs, but you will need video-editing software if you want to make adjustments to your video, such as shortening clips and adding transitions.



# Digital Imaging Glossary

A

Are you confused about what the lingo on camera boxes means? Use this glossary to help decode the world of digital imaging.

**aperture**—An iris-like diaphragm opening that can expand and contract the lens to let you control the amount of light that passes through it, thus affecting the exposure. The term “f-stop” is used interchangeably with aperture.

**burst mode**—A camera mode that will let you capture several shots consecutively after pressing the shutter only one time.

**CCD (charge-coupled device)**—This is the camera’s image-sensing component. It converts light into energy that can be stored as digital data on your camera.

**depth of field**—The area that is in focus in front of and beyond the subject of your photo.

**digital zoom**—Magnifies an image digitally by cropping it and filling in the rest with interpolated pixels, thus degrading the quality. Even if the numbers are impressive, never choose a camera based on digital zoom.

**f-stop**—See aperture. Smaller f-stop numbers mean a wider lens opening; larger f-stop numbers mean a narrower lens opening.

**ISO**—For digital cameras, the ISO setting measures the sensitivity to light (similar to how it does with film). Digital camera ISO settings, such as 200, 400, etc., should capture photos as if one were using film with such a speed. Lower ISO settings mean you need more light and vice versa.



**LCD**—The screen on the back of the camera that lets you see a live-action view of your subject or your photo after you’ve taken it.

**lens**—The apparatus on the front of the camera that gathers and directs light toward the imaging device. In a digital camera, the lens probably has both an optical and digital zoom.

**megapixel**—Approximately 1 million pixels. The higher the megapixel count, the higher the resolution and the more you can crop, which means (in general) better-quality photos.

**memory card**—Because digital cameras have very little onboard memory, they need flash memory cards to store more than a dozen or so images. The type of memory card you need depends on the make and model of your camera. Some of the most popular memory cards are Secure Digital, MultiMedia Card, CompactFlash, and Sony Memory Sticks. In general, memory cards are quite small.

**noise**—The small statistical variations among pixels that lead to (usually) minor distortions of color in a photo.

**optical zoom**—The camera’s mechanical ability to move the lens physically closer to your subject. With optical zoom, the higher the number (such as

5X or 10X), the better. When choosing a camera, always consider the optical zoom, not the digital zoom. Digital zoom artificially adds pixels.

**resolution**—The number of pixels in an image. The higher the resolution, the more detail and quality in a photo. Resolution is measured in a proportion (such as 2,272 x 1,704).

**shutter**—A mechanism that opens and closes to allow light to pass through the lens. You can usually control the camera’s shutter speed.

**shutter speed**—The length of time a camera’s shutter is open to let light through the lens to hit the sensor, which records the image. This is expressed in fractions of a second: For instance, a shutter speed of 1/250 means that the shutter is open for 1/250th of a second.








**viewfinder**—The small opening in the camera that the user looks through to frame a shot. Some digital cameras don’t have a viewfinder and use only the camera’s LCD to frame the shot.

**white balance**—Light levels are adjusted electronically to ensure whites in a certain environment are pure, leading to more lifelike colors. White balance can usually be manually adjusted, too. **PG**



# Which Point-&-Shoot Camera Is Best For You?



If you're a little confused about the most important features in a digital camera, you're not alone. In this chart, we compare features from select digital cameras, and we also explain what these features mean.

		Resolution; Optical zoom	Shutter speed	Memory card	LCD size	Battery life	ISO	Movie mode
What It Means		More pixels mean bigger and clearer prints; Moves the lens closer to your subject	A faster shutter speed will let you snap action photos without blur	Removable card that stores your photos in your camera	The LCD is the screen on the back of the camera	Based on how many shots you can take on a single charge	A higher ISO lets you take better photos in low-light settings	Lets you record short video clips on your digital camera
	<b>Pentax Optio E80</b> MSRP: \$129.95* SKU 9555849	10MP; 3X	1/4 to 1/2,000 seconds	SD/SDHC	2.7 inches	N/A	Auto; Manual: 100, 200, 400, 800, 1600, 3200, 6400	Yes
	<b>Olympus FE-4010</b> MSRP: \$149.99* SKU 9454191	12MP; 4X	1/4 to 1/2,000 seconds	microSD/ xD-Picture Card	2.7 inches	170 shots	Auto; Manual: 64, 100, 200, 400, 800, 1600, 3200	Yes
	<b>Canon PowerShot A3100 IS</b> MSRP: \$179.99* SKU N/A	12.1MP; 4X	1 to 1/1,600 seconds	SD/SDHC/ SDXC/ MMC/ MMCplus	2.7 inches	240 shots	Auto; Manual: 80, 100, 200, 400, 800, 1600	Yes
	<b>Fujifilm FinePix F72EXR</b> MSRP: \$249.95* SKU 9503469	10MP; 10X	1/4 to 1/2,000 seconds	SD/SDHC	2.7 inches	N/A	Auto; Manual: 100, 200, 400, 800, 1600, 3200, 6400, 12800	Yes
	<b>Sony Cyber-shot DSC-WX1</b> MSRP: \$299.99* SKU 9517025	10.2MP; 5X	2 to 1/1,600 seconds	Memory Stick Duo/ PRO Duo	2.7 inches	350 shots	Auto; Manual: 160, 200, 400, 800, 1600, 3200	Yes
	<b>Samsung DualView TL225</b> MSRP: \$349.99* SKU 9501791	12.2MP; 4.6X	1 to 1/2,000 seconds	microSD/ micro-SDHC	3.5 inches; 1.5 inches front LCD	N/A	Auto; Manual: 80, 100, 200, 400, 800, 1600, 3200	Yes
	<b>Canon PowerShot SX20 IS</b> MSRP: \$399.99* SKU 9455127	12.1MP; 20X	15 to 1/3,200 seconds	SD/SDHC/ MMC/ MMCplus	2.5 inches	340 shots	Auto; Manual: 80, 100, 200, 400, 800, 1600	Yes
	<b>Nikon Coolpix S1000pj</b> MSRP: \$429.95* SKU 9613973	12.1MP; 5X	2 to 1/1,500 seconds	SD/SDHC	2.7 inches	220 shots	Auto; Manual: 80, 100, 200, 400, 800, 1600, 3200, 6400	Yes

\*Prices listed in this issue are for general reference and may vary from retailer pricing.

## Which D-SLR Is Best For You?

As D-SLR prices keep coming down, more photographers are turning to them, both as a first camera and as a trade-up to something better. In this chart, we'll help you sort through some of the features and performance specs from select D-SLR cameras.

		Resolution	LCD size	ISO range	Kit lens	Burst speed	Shutter speed
	What It Means	Image sensor in megapixels; more means a bigger image	Diagonal measure of screen on back of camera	A higher ISO range will let you take better photos in low-light situations	Standard lens bundled with the camera body	Frames per second (fps) you can shoot while in burst mode	The wider the range, the greater the gamut of long exposures to frozen action
	<b>Sony Alpha A230L</b> MSRP: \$449.99* SKU 9342473	10.2MP	2.7 inches	10 to 3200	18-55mm standard zoom	2.5fps	30 to 1/4,000 seconds
	<b>Nikon D3000</b> MSRP: \$549.95* SKU 9456803	10.2MP	3 inches	100 to 1600	18-55mm f/3.5-5.6	3fps	30 to 1/4,000 seconds
	<b>Sony Alpha A330L</b> MSRP: \$549.99* SKU 9342142	10.2MP	2.7 inches	100 to 3200	18-55mm	2.5fps	30 to 1/4,000 seconds
	<b>Canon EOS Rebel XS</b> MSRP: \$569.99* SKU 8929699	10.1MP	2.5 inches	100 to 1600	18-55mm	3fps	30 to 1/4,000 seconds
	<b>Pentax K-x</b> MSRP: \$649.95* SKU 9555787	12.4MP	2.7 inches	200 to 6400	18-55mm	4.7fps	30 to 1/6,000 seconds
	<b>Nikon D5000</b> MSRP: \$749.95* SKU 9311755	12.3MP	2.7 inches	200 to 3200	18-55mm	4fps	30 to 1/4,000 seconds
	<b>Canon EOS Rebel T1i</b> MSRP: \$799.99* SKU 9318954	15.1MP	3 inches	100 to 3200	18-55mm f/3.5-5.6	3.4fps	30 to 1/4,000 seconds
	<b>Olympus E-P1</b> MSRP: \$799.99* SKU 9463573	12.3MP	3 inches	100 to 6400	14-42mm f/3.5-5.6	3fps	60 to 1/4,000 seconds

\*Prices listed in this issue are for general reference and may vary from retailer pricing.

## Which Digital Camcorder Is Best For You?

Digital camcorders come in a number of formats: DVD, hard drive, flash drive, MiniDV, and high definition are the most common. By comparing the following digital camcorders, you can determine which recording format and product best fit your style.

What It Means		LCD size	Optical zoom; Digital zoom	Recording speeds	Memory card	Digital still resolution	Lines of resolution
		Diagonal length of viewing screen	Two methods for magnifying depth of field; optical zoom is better	The speeds a particular camcorder can utilize during recording	Compatible flash card types (cards not included unless noted)	The number of megapixels the camcorder can capture in still images	Number of lines of horizontal resolution; the higher the number, the greater the detail
Flash Drive	 <b>JVC Everio GZ-MS110BUS</b> MSRP: \$229.95* SKU 9731174	2.7 inches	39X; 800X	Ultra/Fine/Norm/Eco	SD/SDHC	N/A	480
	 <b>Samsung SMX-F34BN</b> MSRP: \$279.99* SKU 9267189	2.7 inches	34X; 1,200X	SP	SD/SDHC/MMC	N/A	480
	 <b>Sony DCR-SX63</b> MSRP: \$299.99* SKU 9745989	2.7 inches	60X; 2,000X	HQ/SP/LP	Memory Stick PRO Duo/SD/SDHC	N/A	480
High-Definition	 <b>Samsung HMX-H104</b> MSRP: \$579.99* SKU 9369765	2.7 inches	10X; 100X	N/A	SD/SDHC	4.7MP	1,080
	 <b>Canon VIXIA HF21</b> MSRP: \$999.99* SKU 9448289	2.7 inches	15X; 300X	MXP/FXP/XP+/SP/LP	SDHC	3.3MP	1,080
	 <b>Sony HDR-XR150</b> MSRP: \$699.99* SKU 9746014	2.7 inches	25X; 300X	FX/FH/HQ/LP	Memory Stick PRO Duo/SD/SDHC	3MP	1,080
Hard Drive	 <b>Panasonic HDC-HS250</b> MSRP: \$899.95* SKU 9206995	2.7 inches	12X; 700X	HA/HG/HX/HE	SD/SDHC	10.6MP	1,080
	 <b>JVC Everio GZ-MG750BUS</b> MSRP: \$399.99* SKU 9731687	2.7 inches	39X; 800X	Ultra/Fine/Norm/Eco	microSD/microSDHC	0.3MP	480

\*Prices listed in this issue are for general reference and may vary from retailer pricing.



# Expand Your Creativity With A Nikon D-SLR



As you step up to a D-SLR from a point-and-shoot, new opportunities for expanding the creativity in your photos accompany higher image quality and faster shutter response. Nikon's D-SLRs are easy to use, with a host of features to help you achieve outstanding images, including in-camera editing. Whether you're new to D-SLR picture-taking or ready to upgrade your current D-SLR, Nikon has a camera to exceed expectations.

Product Name SKU	Nikon D3000 Kit 9456803	Nikon D5000 Kit 9311755	Nikon D90 Kit 8975184	Nikon D300S Body 9457349	Nikon D700 Body 8928985
					
Estimated Street Price	\$549.95*	\$749.95*	\$1,199.95*	\$1,699.95*	\$2,699.95*
Compatible Lenses (for all functions)†	AF-S or AF-I lenses	AF-S or AF-I lenses	AF NIKKOR lenses (AF-I, AF-S, DX, VR, and D-/G)	AF NIKKOR lenses (AF-I, AF-S, DX, VR, and D-/G)	AF NIKKOR lenses (AF-I, AF-S, DX, VR, and D-/G)
Included Lenses	18-55mm NIKKOR VR Image Stabilization Lens	18-55mm NIKKOR VR Image Stabilization Lens	18-105mm NIKKOR VR Image Stabilization Lens	Available separately	Available separately
LCD Monitor	3 inches 230K-dot Resolution	2.7 inches Vari-angle 230K-dot Resolution	3 inches 921K-dot Resolution	3 inches 921K-dot Resolution	3 inches 921K-dot Resolution
Resolution	10.2MP	12.3MP	12.3MP	12.3MP	12.1MP
Sensor Type	DX-format CCD	DX-format CMOS	DX-format CMOS	DX-format CMOS	FX-format CMOS
Low-Noise ISO Sensitivity	100 to 1600 (expanded 3200)	200 to 3200 (expanded 100 and 6400)	200 to 3200 (expanded 100 and 6400)	200 to 3200 (expanded 100 and 6400)	200 to 6400 (expanded 100, 12800, and 25600)
Shutter Speed	30 to 1/4,000 seconds	30 to 1/4,000 seconds	30 to 1/4,000 seconds	30 to 1/8,000 seconds	30 to 1/8,000 seconds
Built-in Flash	Yes (automatic or user-activated)	Yes (automatic or user-activated)	Yes (automatic or user-activated)	Yes (user-activated)	Yes (user-activated)
Burst Mode	Up to 3fps	Up to 4fps	Up to 4.5fps	Up to 7fps	Up to 5fps
Picture Control Settings	Standard, Neutral, Vivid, Monochrome Portrait, and Landscape	Nine customizable plus Standard, Portrait, Landscape	Nine customizable plus Standard, Portrait, Landscape, and more	Nine customizable plus Standard, Neutral, Vivid, Monochrome, and more	Nine customizable plus Standard, Neutral, Vivid, Monochrome, and more
In-Camera Editing Features	13 Functions, including: Trim, Red-eye correction, Soft Filter, and more	16 Functions, including: Trim, D-Lighting, Red-eye correction, Image Overlay, and more	13 Functions, including: Trim, D-Lighting, Image Overlay, Monochrome, and more	10 Functions, including: Trim, Monochrome, D-Lighting, Filter Effects, Edit Movie, and more	7 Functions, including: Trim, D-Lighting, Image Overlay, Filter Effects, Monochrome, and more
HD Movie Mode	(Stop-Motion Movie Mode only)	Yes with Sound	Yes with Sound	Yes with Sound and Stereo Mic Input	No
Compatible Storage Media	SD, SDHC	SD, SDHC	SD, SDHC	CompactFlash Type I/II; SD and SDHC	CompactFlash Type I
Included Battery	EN-EL9a Lithium-ion Rechargeable Battery	EN-EL9a Lithium-ion Rechargeable Battery	EN-EL3e Lithium-ion Rechargeable Battery	EN-EL3e Lithium-ion Rechargeable Battery	EN-EL3e Lithium-ion Rechargeable Battery
Battery Life (shots per charge)	500 (CIPA)	510 (CIPA)	850 (CIPA)	950 (CIPA); 3,000 (Nikon Standard)	1,000 (CIPA)

\* Prices listed in this issue are for general reference and may vary from retailer pricing.

† For complete compatibility see [www.nikonusa.com](http://www.nikonusa.com).

FirstGlimpse



At the heart of the image™

# D-SLR Camera

## Smart. Sharp. Simply Brilliant.

DIGITAL IMAGING



### Nikon D5000 D-SLR with 18-55mm f/3.5- 5.6G VR IS lens

MSRP: \$749.95

SKU: 9311755 (kit with lens)

MSRP: \$629.95

SKU: N/A (body only)

[www.nikonusa.com](http://www.nikonusa.com)

### Quick Overview

The Nikon D5000 combines logical and easy-to-use controls with a robust combination of features, technologies, and performance. Whether shooting photos or video, this camera packs the tools you need to capture any moment just right. With features such as 12.3 MP, Nikon's EXPEED image processing, NIKKOR optics, and the versatile 2.7-inch Vari-angle LCD monitor, you can capture stunning images and HD video with remarkable ease.

### Perfect For

Consumers who are progressing from a point-and-shoot digital camera or looking to upgrade their current digital SLR.

### Outstanding Benefits

- 12.3-megapixel DX-format CMOS image sensor
- 3X Zoom AF-S DX NIKKOR 18-55mm f/3.5-5.6G VR IS lens
- D-Movie Mode shoots HD Video with sound
- 2.7 inch Vari-angle color LCD monitor
- 19 Auto-exposure Scene Modes
- One-button Live View shows your photo composition in real time
- Continuous shooting as fast as 4 frames-per-second
- Low noise ISO sensitivity from 200 to 3200
- GPS geo-tagging (requires optional GP-1 GPS unit)

### Coollest Feature

Not only does the D5000 take stunning still images, it also captures smooth 24 fps 720p HD video clips with sound for new creative possibilities.

## NOTEWORTHY

# Accessories & Services

Prices for digital camcorders and cameras continue to fall as their video and picture quality improves, which is especially good news for first-time buyers or those looking to upgrade. Pairing your new camcorder or camera with the right products will bring you better photography results. Here are some must-have accessories you should consider buying to get the most out of your digital imaging device. **FC**



## UV FILTER

- Protects digital camcorder and D-SLR lenses from dust, dirt, fingerprints, and scratches
- Get clearer, more detailed videos or photographs when you're shooting in bright conditions



## ADDITIONAL LENSES/CONVERTER LENSES

- Extra lenses for D-SLRs and converter lenses for digital camcorders can enhance your results by extending your field of view, reducing glare, and more
- Telephoto lenses enable you to zoom in from far away, wide-angle lenses give you the ability to get a full view even if you're close to the subject, and macro lenses will let you achieve up-close, detailed shots of your photo subject



## EXTRA MEDIA

- Keep spare memory cards on hand so you can snap away without having to worry about running out of storage space
- Consider having several memory cards with smaller capacities instead of one card with a larger capacity; that way, if something goes wrong with one, you'll still have a backup
- For your digital camcorder, keep more recording media in your bag than you think you'll need, just in case



## EXTERNAL FLASH

- Light up your subjects from greater distances
- Offers better control of lighting conditions when taking photos by directing the angle of the flash



## SPARE BATTERIES & CHARGERS

- Make sure you're never caught without the power needed to capture the perfect moment
- Whether your camera uses proprietary batteries or AAs, keep at least one fully charged spare or set in your camera bag
- An additional battery charger will give you the flexibility to power up your camera batteries anywhere you're headed, even if you're traveling



## REMOTE SWITCH

- A longer cable lets you snap photos without having to touch the camera, which can also reduce camera shake
- May enable the user to lock the shutter for longer exposure times



## DIGITAL IMAGING SERVICES

Once you've set your sights on the camera or camcorder you want, consider taking advantage of the digital imaging services offered by your local CE retailer. Not only can you protect your investment, but you can also discover photography and videography skills that will make your photos and videos picture-perfect.

- D-SLR or Camcorder Service Plan
- D-SLR Training Course
- Camcorder Training Course



## TRIPOD

- Tripods are an easy way to ensure steady video footage
- Pan while recording video in one smooth motion
- Use a tripod and your camera's timer to get a picture of the entire group without needing someone to man the camera
- Keeps your camera steady while you're shooting close-up or distance shots, which can prevent photo blurring



# Link It Up

## Get The Most Out Of A Home Network

*Today, many consumer electronics devices are networkable, and each has one or more reasons to go online. Once the sole province of computers, your network is now part of a vast entertainment grid.*



FEATURE

**HDTVs.** Many new TVs can show you useful info through widgets (small programs) as well as longer content from third-party vendors. For instance, you could get a morning heads up on your busy day with a local weather widget on your TV screen. Later, after work, you could relax with a streaming movie download, thanks to your HDTV's support for your Netflix subscription.

**BD players.** Wireless connectivity is all the rage among Blu-ray Disc players these days, and many come with LAN ports for cabled hookups. With Internet service, your BD deck can tap into exclusive bonus content for BD-Live movie discs. A great example is a brand-new commentary track featuring the original actors from one of your favorite old flicks.

There's more. BD player manufacturers are teaming up with Netflix, Amazon, and others to give you access to online movies, TV shows, and more, similar to the specialized set-top boxes dedicated

to particular online services. Watch for this awesome feature to lead to all sorts of alternative programming avenues.

**Game consoles.** All of the current video-game consoles now support streaming movies from Netflix, among other online features. Your roommate may love his Xbox 360's Xbox Live service for its gaming extras, for instance, but you might prefer to explore its programming from Sky TV, a satellite operator in the UK. And on the digital imaging side, many consoles can stream photos from your networked PCs. See "The Well-Connected Entertainer" on page 71 for more console info.

**Computers and peripherals.** From media streaming to shared Internet access,



Microsoft Xbox 360  
Arcade Console  
\$199.99 • [www.xbox.com](http://www.xbox.com)

backups to file sharing, there are scads of reasons to network your PCs via wired or wireless means. Even when you're on vacation in a place with little Internet access, you can use a cellular modem to link your laptop with the World Wide Web.

Every computer user in your household may want access to a scanner, photocopier, and printer. A Wi-Fi model such as Brother's Network-Ready Wireless Multifunction Printer/Copier/Scanner (\$119.99; [www.bestbuy.com](http://www.bestbuy.com)) lets you easily add these capabilities in a single device, even if your router is out of wired connection ports.

# Connectivity Avenues

## Methods To Get Your Devices Online

*Today, the question isn't if you want to connect your PC, laptop, netbook, smartphone, HDTV, and other devices to the Internet. The question is which connection method is best for you. For most home users, there are four options, each detailed below.*



### Ethernet: Wired For Action

Of all the available options, a wired Ethernet connection offers the best speed and reliability. You'll sacrifice mobility but gain faster downloads, Web browsing, and data transfers between networked devices. Setup and configuration can generally be more complicated, requiring a subscription to Internet access through an ISP (Internet service provider) and then connecting a router or broadband modem to a primary PC using an Ethernet cable. You can then wire additional PCs, notebooks, HDTVs, BD players, game consoles, and other devices to the router for Internet access.

**Perfect For:** Anyone needing consistently fast, reliable Internet performance.

### Wireless: An Eye On Wi-Fi

Staying connected to the Internet in any room of the house without needing wires is the chief advantage of a wireless network. Another is the general ease of establishing a Wi-Fi network, which essentially only requires setting up a wireless router and using a wizard to add devices such as laptops, MP3 players, smartphones, game consoles, and other devices to the network. Some disadvantages include wireless coverage being limited to several hundred feet from a wireless router, periodic dropped coverage, and slower transfer rates (though 802.11n Wi-Fi networks should handle HD media transfers fine).

**Perfect For:** Those with multiple Wi-Fi devices or homes not conducive for wiring Ethernet cable.

### Powerline Network: The Electric Gateway

Mix elements of a wired and wireless network, and you have a powerline connection, which uses a home's electric wiring to move data between devices. You'll need at least two powerline adapters. One plugs into a power outlet near the main PC and directly connects to the modem or router with a short Ethernet cable. The other adapter plugs into an outlet in the room you want to extend the Internet connection to. The second adapter then connects to, say, a notebook, again using an Ethernet cable. The adapters can then transfer data and give Internet access to any computer on the powerline network.

**Perfect For:** Home owners wanting a wireless-like connection with faster speeds than Wi-Fi.

### 3G & 4G: Wherever You May Roam

Smartphones are the best example of devices that use a 3G connection, though laptops, netbooks, and PCs can, as well. A 3G connection taps into a cellular carrier's cell towers to acquire Internet access. Smartphones and some netbooks and laptops integrate 3G support. With many laptops and PCs, though, you'll need an adapter or mobile broadband card to pull in 3G signals. Positively, 3G coverage extends to anywhere you can receive a carrier's signals. Negatively, you'll typically need a monthly coverage plan and experience slightly slower performance than Wi-Fi.

The successor to 3G will be 4G, which will bump download speeds to at least 100Mbps. That means faster data transfers and quicker, smoother Web and media experiences. By early 2012, wireless carriers should have the country covered with 4G access based on WiMAX and LTE (long-term evolution) technologies.

**Perfect For:** Mobile users who want to stay continually connected on the go.

# The Connected Entertainment Center

## Bring The Web To Your Home Theater

*Our home theaters make it possible to enjoy music and videos from all kinds of sources, and the newest components have branched out to deliver Internet connectivity and the ability to play back files stored on our PCs. In this article, we'll detail how specific home-theater electronics can add flexibility to your entertainment center.*



FEATURE

### Built-In Connectivity

Internet-connected HDTVs and BD (Blu-ray Disc) players offer access to popular Web content, such as Facebook, Flickr, or YouTube, through widgets (small preprogrammed hardware applications). In most cases, you'll only need to enter your username and password for the Web service to access your favorite media.

BD players often include several options for streaming movies after paying a monthly subscription, such as Netflix or Blockbuster On Demand, and Internet-connected HDTVs offer widgets for breaking news and Internet radio stations. Many Internet-connected HDTVs and BD players can also search for and play back content stored on PCs connected to your home network.

**Perfect For:** People who want an easy way to access their favorite Web content, such as media streaming, news, and social networking Web sites, on their home theater.

### Add-On Internet

If you've already purchased an HDTV and BD player that aren't of the Internet-connected variety, but you still want to enjoy networked PC or Internet media on your home theater, you can invest in a streaming set-top box. Set-top boxes don't typically offer as many widgets as Internet-connected HDTVs or BD players, but they generally include access to select Internet radio and image-sharing Web services.

**Perfect For:** Those who want to view videos and listen to music stored on their networked PCs or the Web without investing in a new Internet-connected HDTV or BD player.

### Use Your Laptop With Your Home Theater

Intel's Wireless Display ([www.intel.com](http://www.intel.com)) is one of the newest connectivity options available: It allows you to wirelessly stream the video and audio from your laptop to your entertainment center. All you need is Intel's Wireless Display, which at press time was exclusively available on Best Buy's Blue Label 2.0 notebooks, and Netgear's Push2TV adapter (\$99.99; [www.netgear.com](http://www.netgear.com)). The adapter then plugs into a unused HDMI port on either your HDTV or A/V receiver.

**Perfect For:** People who want to use their laptop's display and sound with their home theater components.

### A/V Receiver Connectivity

Many new A/V receivers feature music player docks, which let you use your music player with your surround-sound system. Or, if your receiver has front audio minijacks, you can connect the player to the receiver using a cable. To play music stored on your mobile phone, some A/V receivers include wireless Bluetooth connectivity to let you pair it with the receiver. If satellite radio is more your style, most modern receivers are satellite radio-ready, meaning all you'll need to do is have a service subscription set up to start listening.

**Perfect For:** Those looking for a way to play the music on their MP3 player or mobile phone on a surround-sound system.



# Ditch The Cables

## Wirelessly Handle Your Photos & Videos

*With the help of your wireless home network, you can accomplish more with your digital imaging devices. We'll show you which devices you can connect to your Wi-Fi network so that you can transfer, upload, print, and share your favorite snapshots and videos, without being tethered by cords.*



### Display Unlimited Photos

Wireless digital photo frames create slideshows by using your wireless home network to access the pictures saved on your computer. So, if you have a large number of photos, a wireless digital frame makes it easier to enjoy them because you don't have to spend time transferring your favorites to a memory card or flash drive that needs to be plugged into the frame.

Some wireless digital frames can connect to the Web to stream pictures and slideshows from select photo-sharing sites, so you can enjoy other members' photo albums in addition to your own.

**Perfect For:** Those who want to display all their favorite digital photos in one frame, rather than many.

### Wirelessly Offload Pictures & Videos

Wireless memory cards, such as the Eye-Fi Share (\$79.99; [www.eye.fi](http://www.eye.fi)), can wirelessly transfer pictures from the card to your computer over one of the 32 preferred wireless networks that you program into the card. This means you won't have to use a card reader or cable connection to upload your pictures and videos to your computer. Some wireless memory cards even let you directly upload your pictures to a variety of online photo- and video-sharing sites when you're within range of one of your preferred networks.

**Perfect For:** Situations where you want to quickly upload your photos, such as when you're staying with your daughter and can't wait to share pictures of your new grandchild online.

### Stream Photos To Your Home Theater

Show off your best pictures and most memorable videos to the whole family by displaying them on your HDTV. Many HDTVs are Internet-connectable, which means they can connect to the Internet via your wireless home network or an Ethernet cable. This gives your HDTV access to Instant Content that can be streamed directly to your HDTV, including pictures and videos from online photo- and video-sharing Web sites.

**Perfect For:** Turning your living room into an art gallery with the pictures and videos you stream from the Web.

### Print Photos Wirelessly

Chances are, you'll want to make prints of your favorite pictures to give as gifts or use in scrapbooking projects. By adding a wireless photo printer to your home network, everyone in the family can wirelessly print pictures from their own PCs, even if each computer is in a different room of the house. And because there aren't cables that connect a wireless printer to a single PC, you can put the printer in a location that's convenient for everyone.

**Perfect For:** Families who want to print their favorite pictures from several different computers.

# Staying Connected

## The Magic Of The Network

*Keeping your computer "connected" means far more than just using it to browse the Internet. It can also communicate with other computers and a variety of devices via an Internet connection.*



### Share Your Files

Put simply, file sharing allows you to access a set of files between at least two computers. For example, if you have multiple computers connected to your home network, you can configure them to share everyone's music and video files, so you can access them from any of the computers. You can also share files that are stored in an online location, such as your Web-based file storage account.

File sharing is useful because it allows you, your family, or your colleagues to access your files from a variety of locations, even if they're stored in only one place.

**Perfect For:** Anyone who needs to allow multiple users to access his files, such as with his family at home, or someone who needs to access files from multiple locations, such as at work and on the road.

### Stream Your Media

When you stream audio or video, you're accessing something that is stored elsewhere via an Internet connection. For example, when you listen to streaming Internet radio, the audio that's playing is stored on that radio station's computers rather than yours.

You can stream content from the Internet or from another computer via file sharing, and you can access a media stream from a variety of Internet-connected devices, including notebooks, some digital music players, and even some video game consoles.

**Perfect For:** Any music, radio, video, or TV show fan who wants to enjoy media at home or on the road without toting around large files that take up space on her computer.

### Print Wirelessly

Usually when you print something off, you have to connect your computer to a printer with a cable. Wi-Fi-capable printers, however, can be connected to a wireless home or office network, and any computer using that network can print without having to plug in a cable.

For example, if you have a Wi-Fi-capable printer in your computer room at home, you can print recipes to it from the living room, and your kids can print their homework from their respective bedrooms, all via your wireless home network.

**Perfect For:** Any home or office environment where multiple users need to use a single printer.

### Connecting A Computer

All of the aforementioned ways to stay connected are predicated on being connected to a network. The simplest way to connect your computer to a network is via wired Ethernet or Wi-Fi, which virtually all computers and a variety of other Internet devices are capable of doing.

However, wireless dongles and wireless broadband cards, which are devices that plug into your computer's USB port or PCMCIA card slot, respectively, can also deliver Wi-Fi or 3G connectivity. And, of course, plugging an Ethernet cable into your computer is a simple way to jump on a wired network.

However you get connected, once you're on, the sky's the limit for what you can do.

# Take Your Console Online

## Get The Most Out Of Your Gaming Experience

*Button-mashing teenagers sitting in dingy basements are no longer an accurate representation of the typical gamer (if they ever were). Modern gamers are highly social people who do more than just play games on their consoles. Read on to discover the social and multimedia sides of current consoles and how home network and Web connectivity are the keys to a more complete entertainment experience.*

### Online Options

The consoles from the top three gaming hardware manufacturers, Microsoft, Nintendo, and Sony, all support the ability to connect to home networks and the Internet. The most obvious reason you'd want to get your game console online is to experience the multiplayer element of most games. Depending on the title, games can feature the ability to play competitively against other players, team up with other players to cooperatively experience the game, and even generate a friends list so you can easily find people to play with whenever you're online.



FEATURE

### Gaming Features

The online experience varies based on the console, but connecting them is similar to connecting a PC to your home network: using Wi-Fi or a wired Ethernet cable. The PlayStation 3, Wii, and Xbox 360 all feature free online services that let you do many of the previously mentioned activities. Xbox 360 owners can upgrade from the free service (Silver) to an enhanced service (Gold; \$49.99 per year) to participate in online multiplayer games and use Microsoft's matchmaking and feedback tools. All three consoles also let you purchase and download games directly from your TV.

**Perfect For:** Those who like to play competitively or cooperatively.

### Stream Your Media

Media streaming, which lets you view content stored on your PC via your console and TV, is one of the best reasons to take the plunge with the current console generation. The Xbox 360 is a full Windows media extender, so it works natively with the Windows PC you're using to stream videos, music, and photos. However, this capability will depend on the operating system you're using. The PlayStation 3 also streams media from a PC to your TV for your viewing and listening pleasure. Both consoles support Netflix streaming, which lets current Netflix subscribers watch movies, TV shows, and documentaries directly from the console. The Wii will also be Netflix-ready sometime this spring.

**Perfect For:** Those who want to view and listen to their PC content and other content on their TV.

### Access Extra Features

All three platforms offer a little something extra when networked. The Wii features the Internet Channel, which lets users browse the Internet. Xbox Live users can tap into Facebook, listen to streaming music from Last.fm, and watch streaming movies from Zune Marketplace. And PlayStation Home is a 3D social space that lets PS3 owners create a custom avatar, decorate a personal apartment, chat, shop, watch videos, and more.

**Perfect For:** Those who want to get the most entertainment value out of their gaming console.

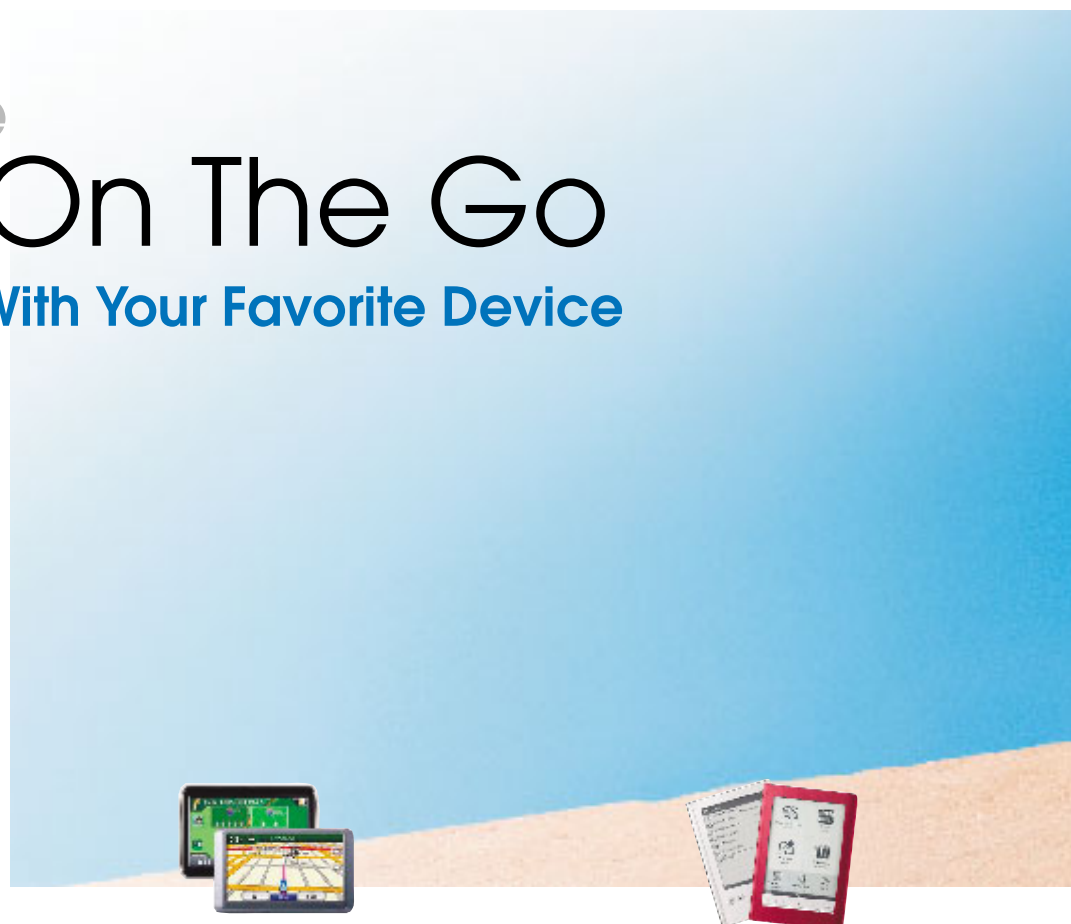


# Get Online While On The Go

## Use The Web With Your Favorite Device

*Because we use the Internet to communicate in our daily lives, it only makes sense to find a portable gadget that can give us access to the Web sites, applications, services, and online content we want. There are more than a handful of portable devices that offer connectivity capabilities.*

*If you're an avid reader, you'll probably gravitate toward an eReader that's Wi-Fi-capable. Frequent business travelers or vacationers will benefit from the connected capabilities of a GPS device or cell phone, so they can access up-to-date maps or stay in contact with loved ones via instant messaging. And MP3 players and portable gaming systems with an Internet connection will satisfy music fans and gaming junkies alike, thanks to online gaming community and music streaming access.*



### Update GPS Devices

We know that a GPS is best used to help you get from point A to point B in a timely fashion. And now, some new GPS devices feature a built-in cellular modem for accessing Internet features, giving you real-time maps and up-to-the-moment traffic updates. Additionally, you're able to check local gas prices, which is a helpful feature whether you're searching for a gas station in an unfamiliar area or you want to find the best nearby price for gas.

With a connected GPS device, you can also email maps and directions to your GPS via a home or office computer, which is convenient for adding mapped itineraries to your GPS. Additionally, some Internet-connected GPS devices are also equipped with a local search function, meaning you can search for hotels, ATMs, and free Wi-Fi hotspots in real time rather than accessing POI data.

**Perfect For:** Travelers who want additional real-time updates and directions on their GPS device.

### Download eReader Content

These portable ebooks are roughly the size of a DVD case (or smaller) and are quickly growing in popularity due to their support for downloadable and online content, including novels, magazines, and blogs. And now, many can use 3G (a high-speed data network offered by cellular carriers) to browse online ebook stores and purchase books. For example, the Sony Reader Daily Edition (\$399.99; [www.sony.com](http://www.sony.com)) lets you download eBooks from the Sony store via 3G when you're sitting in the local coffee shop and you want to start a new novel.

**Perfect For:** Any digital bookworm who wants to download new content without needing to connect her eReader to her computer.



### Play Internet-Connected Games

Not unlike Internet-enabled media players, some portable gaming consoles now support a wireless connection. Using Wi-Fi, you can connect to other network-connected portable gaming devices in the same vicinity to play games head-to-head or surf the Internet using the portable system's browser. This lets you use your portable gaming console to search for additional gaming and media content, including movies and other multimedia. You can also download game demos as previews for exciting new games about to be released.

**Perfect For:** On-the-go gamers who want to play against online competitors, browse the Web, or access and download new content.

### Stream Audio Content

Many of the latest MP3 players do far more than simply play music and store files. Now that some are Internet-enabled, you can use them almost as you would a laptop to access the Web because they are capable of providing the same responsive browsing experience. With the ability to connect an MP3 player to Wi-Fi, you can use it to check your email, manage your online contacts, and download or stream media all while listening to your favorite tunes stored on the device. Or, if you're an avid online social networker, a Wi-Fi-enabled MP3 player will let you stay connected to friends, view posted photos, and send messages when you can access a Wi-Fi hotspot. You'll also be able to download apps that will help you improve your productivity. Additionally, some advanced players can be connected to a Bluetooth-enabled phone so you can use your phone's 3G Internet connection on your MP3 player, when a Wi-Fi hotspot isn't available.

**Perfect For:** The music lover who also wants to stream online video or the social networker who wants to constantly communicate.

### Take Advantage Of 3G & Wi-Fi

When it comes to cell phone connectivity, it's all about speed and availability. A 3G connection will let you efficiently download apps, check email, or look up the latest traffic or weather information. Or, if your phone supports a Wi-Fi connection, you'll be able to access the Internet and get real-time content from your phone via your wireless router when at home (if you've set up a wireless network) or through a Wi-Fi hotspot when you're in a public place.

**Perfect For:** Anyone who needs to use their phone for more than taking calls.

# Asus' Desktop PC Meets Intel's Smart Core i5

## When Innovative Technology Complements Top Design

COMPUTERS

**W**hen you're searching for the perfect PC, you should pay attention to a number of specifications. A component you never want to overlook

is the processor because it's responsible for video and multitasking functionality. The Asus Essentio CG5275-AR003 Desktop PC (\$749.99; [www.asus.com](http://www.asus.com)) features one of Intel's new 2010 Core processors, the Core i5, which is the midrange member of the Core family that clocks in at high speeds and can handle a variety of computing tasks.

### Core Intelligence

Asus comes to the table with its simplistic yet high-powered rig, while Intel delivers on smart processing performance. A powerful PC is going to include a component that propels it beyond the competition: For the Essentio CG Desktop, it's the Intel Core i5 650 processor that makes this powerhouse a firm foundation for a serious rig. Building on this chip, the Essentio CG Desktop has commendable features that round out its potential, including 8GB of DDR3 RAM, Intel HD Graphics, and a 1TB SATA hard drive, all operating on Windows 7 Home Premium 64-bit.

Asus Essentio  
CG5275-AR003 Desktop PC  
\$749.99  
[www.asus.com](http://www.asus.com)



### Plenty To Go Around

The Asus Essentio CG Desktop is a sister computer to Asus' series of Intel Core-embedded notebooks, which all feature an Intel Core i3, i5, or i7 processor. Specifically, the G60JX-RBBX05 Notebook PC (\$1,149.99), designed with a 16-inch LED-backlit widescreen and EAX Advanced HD 4.0 audio, matches the processing capabilities of the Essentio CG Desktop with the inclusion of the Core i5. The U50F-RBBAG05 Notebook PC (\$749.99), with 4GB of

system memory and a 500GB hard drive, features the entry-level Core i3 for 4-way HD-quality processing. Furthermore, the G73JH-RBBX05 Notebook PC (\$1,349.99), outfitted with a backlit keyboard and the ATI Mobility Radeon HD 5870, features the Core i7 that supports 8-way processing.

Pairing the Asus Essentio CG Desktop and Intel Core i5 processor is ultimately the combination of quality craftsmanship and the processing performance to back it up. **FG**

## Intel Is The Core Of The Matter

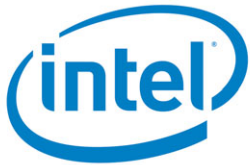
**C**ommonly known as the brain of the computer, the processor ensures your computer can efficiently handle several tasks all at once, such as playing video and converting files, without getting bogged down.

To fully harness this type of processing power, Intel designed its Core i3, Core i5, and Core i7 processors to handle different performance needs. The Core i3 was developed for low-power, 4-way processing purposes, while the Core i7 can handle HD-quality gaming with its 8-way processing. The power and "smarts" of the Core i5 let PC users experience Intel's Turbo Boost Technology, a feature that accelerates the processing power of the CPU, as well as Hyper-Threading multiway processing, which doubles the number of software threads each core can process.









**FirstGlimpse**



# Intel's 2010 Core Processors Together With Asus



Intel has developed a wide range of processors designed for various applications, and its latest iteration of processors—the Intel Core i3, Core i5, and Core i7—can be found in select Asus computers. Some of Intel's processors are designed with “smart” features that enhance computing performance for those who want to get more out of their PCs. In effect, these smart technologies allow you to accomplish more tasks in a short amount of time. From basic and classic performance to the new smart family of processors, Intel has processors available in five performance levels to make it easy to pick the best match for your specific computing needs.

	Summary	Typical Uses & Users	Technology Notes
 <b>Asus G73JH-RBBX05 Notebook PC</b> SKU: 9741729 MSRP: \$1,349.99* 	Processors carrying the i7 brand offer the ultimate in smart performance; the combination of speed and smart performance features makes them the most powerful processors Intel produces for consumer PCs	HD-quality gaming and content creation; people who run demanding applications and need processors that can handle the widest range of computing-intensive tasks and situations	8-way processing, plus Intel Turbo Boost Technology that gives you additional speed when necessary and improves performance
 <b>Asus Essentio CG5275-AR003 Desktop PC</b> SKU: 9699025 MSRP: \$749.99* 	These make up the mid-range members of the three brands of the Core family of processors. i5 processors offer smart performance features with a speed boost	HD-quality computing; people who need processors that can handle a wide variety of computing tasks and situations	4-way processing, plus Intel Turbo Boost Technology that gives you additional speed when necessary and improves performance
 <b>Asus U50F-RBBAG05 Notebook PC</b> SKU: 9701922 MSRP: \$749.99* 	i3 processors give users access to smart performance at an entry level	HD-quality computing; users who want smart performance technologies but at a lower price	4-way processing
	Pentium processors offer classic and reliable performance for users who require slightly more computing power than at the entry level	Everyday tasks; people who use applications that occasionally may be a little more demanding but still don't require intensive computing performance	2-way processing
	Celeron processors offer entry-level computing power and are a cost-effective option for people with tighter budgets	Basic tasks; people who use applications that don't require intensive computing performance	1-way processing <sup>†</sup>

\*Prices listed in this issue are for general reference and may vary from retailer pricing. <sup>†</sup> 2-way versions available in some markets

# HOW TO BUY A \_\_\_\_\_ Netbook

## Easy On-The-Go Computing

**N**etbooks have proven to be ideal travel companions for people looking for a portable, inexpensive computer to complement their notebook or desktop computer.

With their lengthy battery life and Web connectivity options, netbooks are best-suited for those who are looking to access email and social networking sites while on the go. For those considering a netbook, there are several elements to consider before jumping into a purchase.

### Not A Notebook

Netbooks and notebooks are similar, but not the same. Netbooks have significantly less hard drive capacity and RAM. This limits how much content you can store on your netbook and the number of applications that can smoothly operate simultaneously. Additionally, most netbooks lack an optical disc drive, so you will have to purchase an external one in order to listen to CDs or download software from a disc.

However, netbooks are built for on-the-go use because they have a longer battery life, offer a wide variety of Web

connection options, and are lightweight. This makes them a good option for both students who need to take notes during class and frequent travelers who want to stay connected to family and friends.

### Make The Right Connection

Netbooks are designed to let you connect to the Web while you're on the go, which is why they offer several different Web connection options. Almost all netbooks come with built-in Wi-Fi support, along with an Ethernet port for a wired connection. Some netbooks also come with a built-in 3G modem to access a 3G network. However, this means you will also need to sign up for a data plan with a wireless provider.

### Netbook Necessities

Although they are not as powerful as notebooks, there are still plenty of features to consider. For starters, netbooks come with either Windows 7 or Windows XP operating systems. Win7 offers some new features that let you connect

multiple PCs more seamlessly. Because a netbook is designed to complement the other computers in your house, Win7 makes it easy to switch from one computer to the other.

Some netbooks offer a screen size of 10 inches or less, which is sufficient for a student who wants to take notes during class. But for viewing lots of Web videos and photos, more than 10 inches is suggested. Some netbooks offer high-resolution screens, so your media will appear clear and vibrant on your netbook screen.

To make up for the lack of internal components, many netbooks provide multiple USB ports for attaching peripherals (such as an external hard drive or optical drive) and media card readers that let you upload photos to the Web. Many netbooks also come with added features, such as a built-in Web cam and preinstalled software from Microsoft and Adobe.



## Netbook Notes

- Netbooks are designed to complement other computers and offer a long battery life.
- You can choose from different operating systems, screen sizes, and connectivity methods.
- Most netbooks are Wi-Fi- and Ethernet-compatible but might also provide a modem to access a 3G network.

### Practical Portability

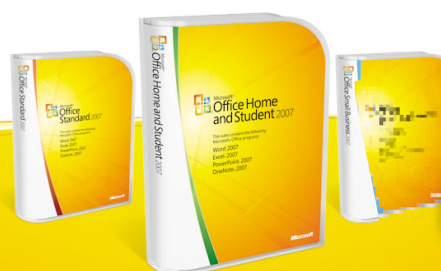
Consider a netbook as a complement to other computers if you need a fast, easy way to connect to the rest of the world from nearly anywhere. **FG**

BY TESSA WARNER BRENNEMAN.



# Microsoft Technology Guaranteed

**Buy Office 2007 Today,  
Download Office 2010  
Tomorrow—FREE**



Learn about the  
**OFFICE 2010  
TECH GUARANTEE**  
at [office.com/techg](http://office.com/techg)

**L**iving in the present is smart. So is planning for the future. With Microsoft's Technology Guarantee Program ([www.office.com/techg](http://www.office.com/techg)), you can easily do both. Buy a standalone or preinstalled copy of Office 2007 today, and you can upgrade to an equivalent version of Office 2010 when it's released this summer at no extra cost. Read on to find out how.

## Tech Guarantee Starts March 5th

With the Technology Guarantee Program, you can get to work right now with Office 2007 and still better your situation with Office 2010 later without spending extra. And doing so only takes three steps. First, buy a qualifying standalone copy of Office 2007 or a new notebook or PC with the suite preinstalled between March 5 and Sept. 30. (See the "Which Office Is Mine?" chart for available products.) Second, install and activate Office 2007 using the accompanying Product Key by Sept. 30. Third, after Office 2010 releases, go to [www.office.com/techg](http://www.office.com/techg) by Oct. 31 and use your Office 2007 sales receipt and Product Key to download and

activate an equivalent Office 2010 version at nothing extra. (Alternatively, you can receive your Office 2010 upgrade on DVD for a fee.)

## What's New In 2010

The improvements in store with Office 2010 will only enhance what you can already do with 2007. A new Backstage view and improved Ribbon interface, for example, will speed up finding tools and commands in programs, while new photo and video tools will expand PowerPoint's reach. New Sparklines minicharts in Excel, meanwhile, will help uncover financial trends you can plan business decisions around. Add in new creative, professional Text Effects tools in Word and OneNote's ability to gather notes, documents, and

data into one convenient digital notebook, and the Technology Guarantee Program offers plenty to look forward to while you stay productive now. **FC**

## How The Program Works

1. Buy a qualifying Office 2007 product or a new PC with Office 2007 between March 5 and Sept. 30.
2. Install and activate your copy of Office 2007 by Sept. 30.
3. Once Office 2010 is available, simply go to [www.office.com/techg](http://www.office.com/techg) by Oct. 31 to download it at no additional cost, or purchase a DVD for a fee.

## Which Office Is Mine?

Office 2007 Qualifying Product	Office 2010 Upgrade Product
Office Home & Student 2007	Office Home & Student 2010
Office Standard 2007	Office Home & Business 2010
Office Small Business 2007	Office Professional 2010
Office Professional 2007	Office Professional 2010
Office Ultimate 2007	Office Professional 2010

**FirstGlimpse**



# The Best PC Investment

## The Benefits Of Using A Surge Protector



ou and your family rely on your desktop or notebook computer to work, play, and learn, so chances are you want to protect it from data loss or hardware damage. One of the

best ways to safeguard your computer is to connect it to a surge protector.

### What Is A Surge Protector?

A surge protector looks similar to a power strip and has multiple outlets to plug in your computer, monitor, and other peripherals such as a printer or fax machine. But more importantly, it also protects your computer and peripherals from power surges, which are sudden peaks in the electrical current flowing into your home. Power surges can be caused by downed power lines, faulty wiring, or regular electrical maintenance in your neighborhood. Fluctuations in the electrical current being delivered to your PC and its components can cause permanent damage to hardware, such as the

motherboard, processor, or hard drive, causing a loss of irreplaceable files. Over time, power surges can shorten the life span of your computer equipment, but a surge protector will absorb any increase in electrical current and shield your system from potential harm.

### Features That Protect

A surge protector is equipped with an indicator light that tells you if the unit is functioning properly and safeguarding the devices plugged into it. A long-lasting surge protector will have a rating of at least 1,000 joules. The joule rating tells how much energy the surge protector can absorb before it will no longer function. While most surge protectors will last several years, it's possible for a sizable surge to wear out a surge protector, rendering it ineffective. When the indicator light on your surge protector no longer works, you know it's time to purchase a replacement to continue to defend your

computer setup against fluctuations in power.

Many surge protectors feature an EMI (electromagnetic interference) and RFI (radio frequency interference) filter, which ensures that interference from nearby devices such as a radio, household appliances, or another PC won't affect your computer's performance. Interference can cause your computer to hum or your monitor's image to flicker or wave. The filter also protects your other devices from any interference your computer might emit. Surge protectors can also feature phone line and coaxial inputs, which will help safeguard your telephone and modem from the effects of a power surge.

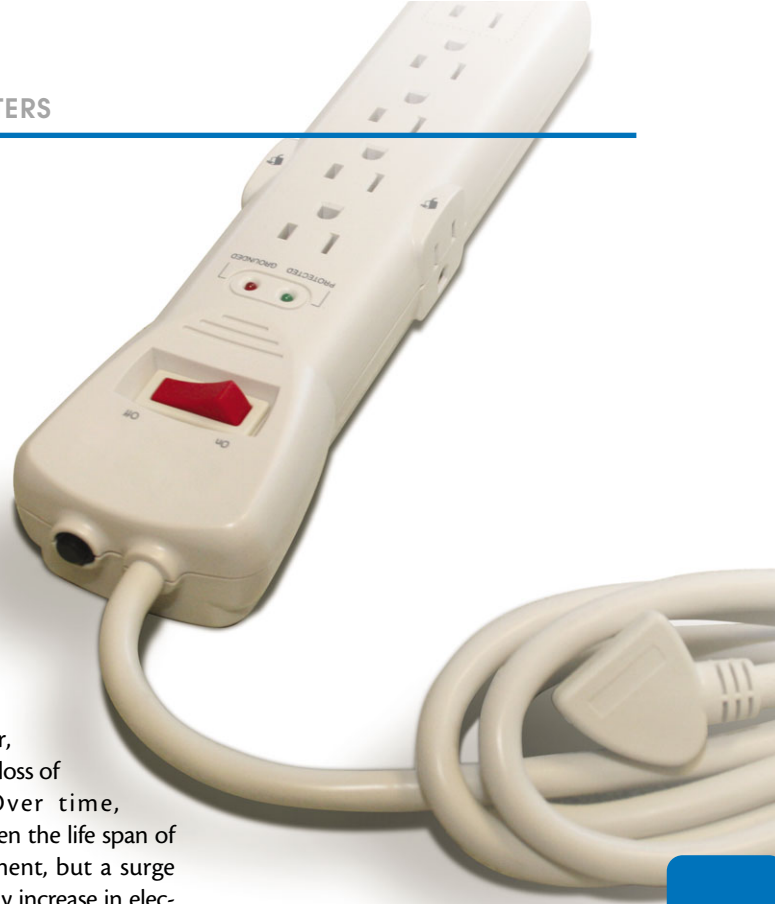
### Safe From Surges

Connecting your computer and its accessories to a surge protector will help keep your equipment out of harm's way from the unexpected power surges that can result from normal maintenance performed by your electrical company, faulty wiring, or downed power lines. **FG**

BY KRIS GLASER BRAMBILA

## Power Surge Culprits In Your Home

**A**lthough it's possible for lightning strikes to cause power surges, they are actually the least common cause. More often, power surges are attributed to the high-powered devices in your home, such as your air conditioner or refrigerator. These devices require a lot of power to cycle on and off, which can cause a fluctuation in your home's electrical system. This unavoidable surge happens regularly, making a surge protector a smart addition to your computer setup.



# The CPU & You

## What To Know About Processors

**P**rocessors are the first component many users consider when buying a new PC, and for good reason. Everything tied to a computer relies on the CPU to function.

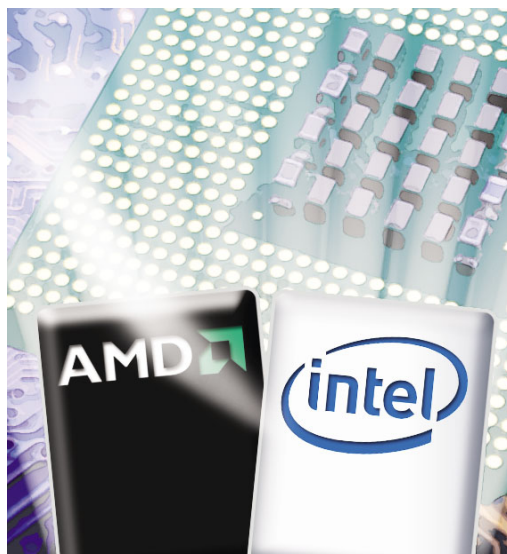
Remove it, and the PC is essentially a pile of dead weight. The following details what to consider about CPUs when buying a new PC.

### Know Thy Maker

In the consumer space, AMD ([www.amd.com](http://www.amd.com)) and Intel ([www.intel.com](http://www.intel.com)) are the CPU players, and each has its devotees. Currently, prevailing wisdom suggests Intel's CPUs win out performance-wise, while AMD's are less expensive. Important for users to note is that most computer makers sell systems using both companies' CPUs, and average users generally won't notice a significant performance gap using a particular company's processors. Further, because each company continually pushes the other innovation-wise, buyers benefit from ever-advancing performance and environmentally fiscal designs.

### The Speed Factor

Historically, processors took the approach of the faster, the better, with the more clock speed (number of times per second a CPU processes a set of instructions) offered, the faster the CPU could tackle tasks. Although processor speed—measured in megahertz (millions of clock cycles per second) and gigahertz (billions)—is still important, it's no longer



### CPU Considerations

When buying a new PC, note:

- An Intel or AMD processor should give average users comparable performance.
- Focus less on speed and more on the number of cores.
- Your computing requirements will dictate the CPU power you really need.
- Invest in a good CPU cooling system.

the defining indicator of a CPU's worth. Instead, a CPU's architecture and the performance-boosting technologies included are better indicators of potential.

### At The Core

Architecture-wise, CPUs now revolve around using multiple cores. For mainstream CPUs, this means putting two, three, four, or (soon) six processing cores on one chip, thus multiplying processing

ability. Augmenting this are multi-threading technologies that essentially fool the PC into seeing double the actual cores present. Thus, a dual-core processor can perform as four cores. Intel's new desktop 3.33GHz Core i5-661 (\$229.99), for example, has two cores and four threads. It also uses Intel's Turbo Frequency technology to automatically bump up processing speed to 3.6GHz when able.

### Know Your Limits

Long-time advice has been to buy as much processing power as possible. Counter that with what you'll primarily use your new PC for. If you'll mostly Web surf, track finances, and manage email, a low-end, dual-core CPU, such as an Intel Pentium E6300 (\$81.99), is sufficient. If you'll regularly convert and edit video files and play graphically demanding games, a high-end dual-core or quad-core processor, such as the quad-core Intel Core i7-950 (\$569.99), is better.

### Other Considerations

The more wattage a CPU consumes, the more heat it produces. Thus, an effective cooling system is imperative to prevent related damage. Additionally, if you anticipate upgrading the CPU down the road, know that you may need to upgrade the motherboard, too, as an older motherboard's socket, which a CPU uses to attach to the board, may not physically jibe with a new processor. **FG**

BY BLAINE FLAMIG

# Wireless Routers 101

## What You Need To Know Before You Make A Purchase

**I**mplementing a wireless home network lets you surf the Web from anywhere in your home using a notebook, a netbook, a smartphone, or any other wirelessly connected device. The ins and outs of purchasing a wireless router for your home network might leave you perplexed, but understanding your options will lead to success in finding the perfect wireless router for your needs.

### The ABCs Of Wireless Standards

When you're shopping for a wireless router, you will notice that each model is compatible with certain standards, such as 802.11b, 802.11g, and 802.11n. Of these, the 802.11b standard is the oldest but is still supported by some devices. Its transfer rate (11Mbps) is slower than 802.11g (54Mbps), a newer standard. The most recent standard is 802.11n, which offers a throughput of up to 300Mbps.

Most wireless routers are backward-compatible, meaning they can support

older wireless standards. If you have devices that use different standards, look for an 802.11b/g/n router, which will be compatible with all of your devices and other Wi-Fi peripherals. Note that some routers might list compatibility with Draft N, which was an early version of the 802.11n standard that works with current 802.11n devices.

The speed you should look for depends on your needs. For example, the 802.11n standard is necessary for streaming music and movies or for online gaming. The speed of this standard will also shorten download time and ensure strong performance.

### Other Features

Both 802.11g and 802.11n can use MIMO (Multiple Input/Multiple Output) technology, which utilizes multiple antennas to enhance range and performance. This allows you to enjoy quicker wireless speeds at a greater distance from your wireless router. However, not all models will offer this feature.

Some routers also feature dual-band frequencies. These models broadcast Wi-Fi

over two frequencies, 2.4GHz and 5GHz, instead of just one. This essentially creates two wireless networks, giving you the flexibility to change over to the other frequency if one is busy.

Finally, be sure the router you purchase has extra Ethernet ports. This will let you make a wired connection to devices in addition to wireless connections.

### Stay Safe

The security features of your wireless router are also important. WPA (Wi-Fi Protected Access), which encrypts data from your computer and implements user authentication, is the strongest and most common encryption configuration in wireless routers. Firewalls block unauthorized users from accessing a network, therefore blocking cyber criminals from getting to your data. And some networks come with parental controls that block access to certain Web sites (either by URL or keywords). Wireless routers all come with an assortment of these types of security features, so you can choose the best combination for your family. **PG**

BY TESSA WARNER BRENNEMAN



## Router Shopping Tips

- Get a router that supports the frequencies your devices require. Some are backward-compatible with older standards.
- Look for extra features, such as MIMO and dual-band frequencies. These can enhance your router's performance.
- Before buying, check the router's security features to make sure they match your computing and lifestyle needs.



# Top 10 Things To Know About Networking

## Keep It Simple, Safe & Speedy

**S**etting up a wired or wireless network at home or networking while on the road only requires a few components. At the core of any network is the router, a central hub through which all the connected devices communicate and access Internet service. On a wired network, devices connect via a high-speed cable called Ethernet cable. On a wireless network, computers connect through the Wi-Fi protocol, although Wi-Fi routers often include a few Ethernet ports, as well.

Once everything is set up, there are a few additional things you should take into consideration. These 10 tips will help keep your network operations running smoothly.

### 1 Tell your computer what you want to share.

Networking lets you access files and additional resources on other computers connected to the same network. But you can do this only after you've enabled File Sharing in your computer's Control Panel (Windows) or System Preferences (Macs).

### 2 Consolidate your setup with network-ready peripheral devices.

Some printers, scanners, and external hard drives let you connect them to a network router. This way, a single device is available to all network users instead of needing one at each computer.

### 3 For optimal performance, set your Wi-Fi router to 802.11n.

Wi-Fi, whose technical label is 802.11, uses four possible standards: a, b, g, and n. The latest standard is 802.11n, which provides the best combination of transmission speed, range, security, and flexibility.

### 4 If your Wi-Fi router supports it, use the 5GHz frequency.

Most wireless networks use the 2.4GHz frequency, which numerous other gadgets (cordless phones, game controllers, Bluetooth devices, microwave ovens, and more), also use. Too many competing devices can cause signal interference in the form of slowdowns and dropouts. However, many routers now offer a 5GHz option, which is much less crowded.

### 5 Keep your Wi-Fi network private by activating your router's password-protected encryption.

This will prevent strangers from using your Internet service by wirelessly connecting to your network. Such uninvited guests will, at the very least, leech part of your bandwidth but may also have more nefarious schemes in mind—for example, exploring files on your hard drive or using your service for illegal activity.

### 6 For protection from outside attacks, use your router firewall instead of your computer firewall.

A home computer only needs one firewall to protect it from external threats. Generally, router firewalls are more powerful than their software counterparts and won't impede traffic within your network.

### 7 If you are worried about internal threats, you will need a software firewall.

Router firewalls only monitor inbound communication. If you're apprehensive about spyware or other malware sending out information about you, a software firewall will monitor outgoing traffic and alert you to unexpected communication.

### 8 Network connections might stop working every once in a while.

Network connections will inexplicably fail sometimes but can usually be restored simply by turning off your router for a few moments and then turning it back on. If Internet access is affected (and it isn't your service provider's fault), turn off your modem, too; after its connection is re-established, turn your router back on.

### 9 For networking while traveling, be prepared by bringing the proper hardware.

A notebook computer with built-in Wi-Fi will let you join wireless networks (also known as hotspots) just about anywhere. But bring along a short Ethernet cable, too, in case unforeseen circumstances require you to make a wired connection.

### 10 When networking in public, disable File and Printer Sharing.

Chances are you don't need these in, say, a coffeehouse. So turn them off. On a public network, hackers could use these open settings to exploit your computer. **FC**

BY BRIAN HODGE

# Essential

## THINGS TO KNOW

### SECURITY SOFTWARE

#### Q Why do I need security software?

A Security software can keep your computer safe from Internet-borne threats and viruses. It can keep your computer running properly and clean from malware and also prevent identity theft.

#### Q What is malware?

A Malware is malicious software that is designed to access a computer without a user's consent. Some common forms of malware are computer viruses and worms, spyware, adware, and Trojan horses.

#### Q What are the different types of security software available?

A Antivirus software will seek out malware and alert you to malicious files that are stored on your PC and could potentially harm it. Antispyware software scans your computer for spyware to make sure no one is monitoring it and potentially stealing your private information. These are often sold together but can also be purchased separately.

#### Q What kind of threats can security software prevent?

A Security software works to prevent the effects of malware, such as computer hijacking, identity theft, and computer viruses. Some versions also check file downloads to be sure they don't include programs that can harm your computer and the legitimacy of Web sites.

#### Q What is the difference between software I can buy and software I can use for free?

A While free security software offers some protection for your computer, it won't be as comprehensive as what's offered by software you purchase. Also, all purchased software offer automatic updates to help you combat the most recent threats; this is not always the case with free versions.

#### Q What features should I look for in a software suite?

A Make sure you invest in software that includes automatic protection, updating, and scanning features against threats. If you plan to install the program on more than one computer, look for a suite that includes more than one software license.

#### Q Is there software available that can keep me safe on the Internet?

A An Internet security suite will include extra features to keep you safe while you surf the Web, such as a firewall and identity theft protection. Some versions will also block suspicious emails and instant messages and check the legitimacy of Wi-Fi hotspots before letting you connect.

#### Q What is a firewall?

A Some security suites include a firewall feature, which is another layer of protection against Internet threats. The firewall forms a barrier between your home network and the Internet by monitoring all incoming activity and blocking hackers or malware.



# Computing Glossary

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hopping for a computer can be intimidating, especially with all of the complex terminology. Here, we'll explain some common computer jargon.

**Bluetooth**—A short-range wireless standard that connects devices such as computers, printers, PDAs, and digital cameras so they can be used together without being connected physically with a cord.

**broadband**—Network connections that transmit high-speed Internet access. Broadband speed varies depending on the provider. Cable companies offer speeds of around 8 to 11Mbps, whereas phone companies offer DSL (Digital Subscriber Line), which supports speeds of 3 to 5Mbps.

**CRT (cathode-ray tube)**—An old analog display technology for TVs and computer monitors. It features an electron gun illuminating phosphor dots that line the inside of a glass tube. When the phosphors are lit, they display on-screen images. CRTs consume a great deal of power and are heavy and bulky. Many CRTs support digital signals, though these degrade when converted to analog.

**dual-core processor**—This integrated circuit, which controls the computer, features two processors, each with its own cache, on a single die or chassis. In a dual-core configuration, the operating system has two processors to handle instructions, speeding up the computer and its ability to multitask.

**Ethernet**—A widely used LAN protocol in which computers and networks are physically linked with a cord.

**firewall**—Hardware or software that limits access by a network or another outside source to your computer; it also may limit your computer's access to the network. These security measures are designed to protect your computer from outsiders who'd like to exploit it in some way. By the same token, firewalls may prevent infected files on your computer from accessing the larger network and spreading the problem to other users.

**LAN (local-area network)**—A group of computers that are physically connected by wires so they can communicate with one another and share information.

**LCD (liquid-crystal display)**—This technology sandwiches liquid crystals between thin sheets of glass. The crystals twist and untwist to allow and block light from a backlight, forming the images you see. LCDs are thinner, lighter, and consume less power than CRTs. Initially used mostly in notebook PCs, you'll now find LCD TVs and computer monitors, and they are also in digital cameras, cell phones, and portable DVD players, among others.

**office suite**—Productivity software, such as Microsoft Office, StarOffice, and



OpenOffice, that often includes word processing, spreadsheet, presentation, database, and financial tools.

**operating system**—The software, such as Windows Vista, Windows 7, or Mac OS X, that controls a computer and its peripherals and serves as the primary interface for the users.

**processor**—Also known as a microprocessor or the CPU, this integrated circuit controls the computer.

**RAM (random-access memory)**—A type of memory that's read from and written to by the CPU and hardware.

**upgradeable**—This term refers to the ability to add or swap out hardware to boost a computer's performance, increase its speed, or replace a defective or obsolete device or component. For instance, you may add more memory, replace an old CRT with a widescreen LCD, or swap out an older video card for a newer one that features an ATSC TV tuner so you can watch digital TV on your computer. Look for a computer with expansion slots or empty bays.



## Which Notebook Computer Is Best For You?

A notebook computer is a pretty big purchase for most people, and it's usually a bit overwhelming, too. This chart compares the features and specs from several different types of notebook models.

		Operating system	Processor	Hard drive size; RAM	Screen size	Dimensions; Weight	Optical drives; Media card reader
	What It Means	The software (usually Windows or Mac OS X) that controls your computer	Chip that controls the computer (typically, a bigger number is better)	How much data the computer can hold; Memory that's read and written to	The diagonal measurement of the notebook's screen	Height x width x depth; How much the laptop weighs	Drives that can read and write discs; Slots that read media cards without a separate peripheral
	<b>Acer AS5532-5535</b> MSRP: \$349.99* SKU 9555769	Windows 7 Home Premium	1.6GHz AMD Athlon	160GB; 3GB	15.6 inches	1.5x14.4x10.8 inches; N/A	Double-layer DVD±RW/CD-RW; Yes
	<b>HP Pavilion dv7-3065dx</b> MSRP: \$729.99* SKU 9556296	Windows 7 Home Premium	2.4GHz AMD Turion II Ultra Dual-Core	500GB; 4GB	17.3 inches	1.37 to 1.7x16.2x10.9 inches; 7.69 pounds	Double-layer DVD±RW/BD/CD-RW; Yes
	<b>Toshiba Satellite E205-S1904</b> MSRP: \$899* SKU 9701191	Windows 7 Home Premium	2.2GHz Intel Core i5	500GB; 4GB	14 inches	1.22x13.7x9.57 inches; 5.1 pounds	Double-layer DVD±RW/CD-RW; Yes
	<b>Apple MacBook</b> MSRP: \$999* SKU 9611541	Mac OS X 10.6 Snow Leopard	2.26GHz Intel Core 2 Duo	250GB; 2GB	13.3 inches	1.08x13x9.12 inches; 4.7 pounds	Double-layer DVD±RW/CD-RW; No
	<b>Dell Studio s15z-2249CPN</b> MSRP: \$999* SKU 9684515	Windows 7 Home Premium	2.2GHz Intel Core i5	500GB; 4GB	15.6 inches	N/A	Double-layer DVD±RW/CD-RW; Yes
	<b>Asus G60VX-RBBX05</b> MSRP: \$999.99* SKU 9556072	Windows 7 Home Premium	2.1GHz Intel Core 2 Duo	320GB; 4GB	16 inches	1.6x14.8x10.4 inches; 7.2 pounds	Double-layer DVD±RW/CD-RW; Yes
	<b>Sony VAIO VPCS111FM/S</b> MSRP: \$1,049* SKU 9701289	Windows 7 Home Premium	2.2GHz Intel Core i5	500GB; 4GB	13.3 inches	1.08 to 1.24x12.95x9 inches; 4.4 pounds	Double-layer DVD±RW/CD-RW; Yes
	<b>Asus G73JH-RBBX05</b> MSRP: \$1,349.99* SKU 9741729 	Windows 7 Home Premium	1.6GHz Intel Core i7	500GB; 6GB	17.3 inches	0.75 to 2.2x12.59x16.34 inches; 7.5 pounds	SuperMulti DVD±RW; Yes

\*Prices listed in this issue are for general reference and may vary from retailer pricing.

## Which Netbook Is Best For You?









Netbooks don't offer the full capabilities that notebooks do, but these compact devices are ideal for those who need to stay connected while on the go. To find the netbook that fits your mobility needs, here's a comparison of the latest models.

		Operating system	Processor	Hard drive size; RAM	Graphics card	Memory card reader	Ports
	What It Means	The software (usually Windows XP or Linux) that controls your PC	Chip that controls the computer (typically, a bigger number is better)	How much data the computer can hold; Memory that's read and written to	Controls the quality of the video and images you see on-screen	Slots that can read media cards without a separate peripheral	Sockets that give your computer access to different peripherals
	<b>eMachines EM250-1915</b> MSRP: \$299.99* SKU 9740848	Windows XP Home SP3	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/MMC/MS/MS Pro/xD-Picture Card	3 USB; 1 Ethernet
	<b>Asus Eee PC 1005HAB</b> MSRP: \$299.99* SKU 9708112	Windows 7 Starter	1.6GHz Intel Atom	160GB; 1GB	Intel UMA Graphics	SD/SDHC/MMC	3 USB; 1 Ethernet
	<b>MSI U100-641US</b> MSRP: \$329.99* SKU 9178775	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 950	SD/MMC/MS/MS Pro	3 USB; 1 Ethernet; 1 VGA
	<b>Gateway LT2122u</b> MSRP: \$329.99* SKU 9728498	Windows 7 Starter	1.6GHz Intel Atom	250GB; 1GB	Intel Graphics Media Accelerator 3150	SD/MMC/MS/MS Pro/xD-Picture Card	3 USB; 1 Ethernet; 1 VGA
	<b>Samsung NP-N150-JA03US</b> MSRP: \$349.99* SKU 9727287	Windows 7 Starter	1.6GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 3150	SD/SDHC/MMC	3 USB; 1 Ethernet; 1 VGA
	<b>HP 210-1080NR</b> MSRP: \$379.99* SKU 9739458	Windows 7 Starter	1.6GHz Intel Atom	250GB; 1GB	Intel Graphics Media Accelerator 3150	SD/MMC/MS/MS Pro/xD-Picture Card	3 USB; 1 Ethernet; 1 VGA
	<b>Sony VPCW211AX/L</b> MSRP: \$449.99* SKU 9724183	Windows 7 Starter	1.6GHz Intel Atom	250GB; 1GB	Intel Graphics Media Accelerator 3150	SD/MS Duo	2 USB; 1 Ethernet; 1 VGA
	<b>Lenovo S10-3T-0651</b> MSRP: \$449.99* SKU 9717941	Windows 7 Starter	1.6GHz Intel Atom	250GB; 1GB	Intel Graphics Media Accelerator 3150	SD/MMC/MS/MS Pro	2 USB; 1 Ethernet

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## Which All-In-One PC Is Right For You?

An all-in-one computer is compact, thanks to all its hardware being placed in the monitor. Some models offer a touchscreen interface that lets you access functions by selecting on-screen items with your finger, while others rely on a wireless mouse and keyboard. To see which all-in-one PC fits your needs, check out the chart below.

		Operating system	Processor	Hard drive size; RAM	Display; Optical drive	Ports	Graphics card
What It Means		The software (usually Windows or Mac OS X) that controls your computer	Chip that controls the computer (typically, a bigger number is better)	How much data the computer can hold; Memory that's read and written to	Display size (measured diagonally); Disc drive included with the system	Sockets the computer has for accessing peripherals	Controls the quality of your video and images
	<b>MSI WindTop AE1900-14SUS</b> MSRP: \$399.99* SKU 9571395	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	18.5 inches; Double-layer DVD±RW/CD-RW	4 USB, 1 Ethernet, media card reader	Intel Graphics Media Accelerator 950
	<b>Averatec D1130EA1E-1</b> MSRP: \$599.99* SKU 9182421	Windows XP Home	1.6GHz Intel Atom	160GB; 1GB	18.4 inches; Double-layer DVD±RW/CD-RW	5 USB, 1 Ethernet, media card reader	Intel Graphics Media Accelerator 950
	<b>Sony Vaio VGC-JS450F/S</b> MSRP: \$999.99* SKU 9561592	Windows 7 Home Premium	2.7GHz Intel Pentium	500GB; 4GB	20.1 inches; Double-layer DVD±RW/BD/CD-RW	1 USB, 1 Ethernet, media card reader	Nvidia GeForce 9300M GS
	<b>Apple iMac</b> MSRP: \$1,699* SKU 9611587	Mac OS X v10.6 Snow Leopard	3.06GHz Intel Core 2 Duo	1TB; 4GB	27 inches; Double-layer DVD±RW/CD-RW	4 USB, 1 Ethernet, 1 FireWire, 1 SD	ATI Radeon HD 4670
	<b>Gateway ZX4800-02</b> MSRP: \$749.99* SKU 9527942	Windows 7 Home Premium	2.1GHz Intel Pentium	750GB; 4GB	20 inches; Double-layer DVD±RW/CD-RW	6 USB, 1 Ethernet, media card reader	Intel Graphics Media Accelerator X4500HD
	<b>HP TouchSmart 300-1020</b> MSRP: \$899.99* SKU 9563171	Windows 7 Home Premium (64-bit)	2.7GHz AMD Athlon II	500GB; 4GB	20 inches; Double-layer DVD±RW/CD-RW	5 USB, 1 Ethernet, media card reader	ATI Radeon HD 3200
	<b>Sony Vaio VPC-L111FX/B</b> MSRP: \$1,299.99* SKU 9560995	Windows 7 Home Premium (64-bit)	2.7GHz Intel Pentium	320GB; 4GB	24 inches; Double-layer DVD±RW/BD/CD-RW	5 USB, 1 Ethernet, 1 i.Link, media card reader	Nvidia GeForce G210M
	<b>HP TouchSmart 600-1055</b> MSRP: \$1,599.99* SKU 9555821	Windows 7 Home Premium (64-bit)	2.13GHz Intel Core 2 Duo	750GB; 4GB	23 inches; Double-layer DVD±RW/BD/CD-RW	6 USB, 1 Ethernet, media card reader	Nvidia GeForce GT230M

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## Software Listings

Get More Out Of Your PC

Computers can be used to create greeting cards, play games, balance your checkbook, and more. The thing is, most of these functions aren't available straight out of the box. To fully harness your computer's potential, you'll need to buy software. Here are some options.

### Art/Illustration/Graphics

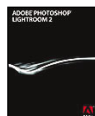


#### Corel Digital Studio 2010

\$99.99\*

[www.corel.com](http://www.corel.com)

Perfect for organizing your digital media, this software suite includes the 2010 versions of PaintShop Photo Express, VideoStudio Express, DVD Factory, and WinDVD.



#### Adobe Photoshop Lightroom 2

\$299\*

[www.adobe.com](http://www.adobe.com)

This photo management software from Adobe lets you quickly and easily import, process, manage, and showcase your images. It can integrate with Photoshop CS4.



#### Roxio Creator 2010

\$99.99\*

[www.roxio.com](http://www.roxio.com)

Use Roxio Creator 2010 to easily capture, enhance, and save your photos, videos, and audio projects. Sharing is available via CD, DVD, your mobile phone, your iPod, or YouTube. It also includes video tutorials for advanced users and beginners.



#### Broderbund The Print Shop 23 Deluxe

\$49.99\*

[www.broderbund.com](http://www.broderbund.com)

No matter the project, you can use The Print Shop 23 Deluxe to easily create banners, business cards, letterhead, calendars, photo greeting cards, invitations, and more.

### Audio/Video



#### Pinnacle Studio Ultimate Collection

\$129.99\*

[www.pinnaclesys.com](http://www.pinnaclesys.com)

Pinnacle Studio Ultimate Collection comes with a full set of plug-ins and a Chroma-key green screen for advanced effects, editing, and production.



#### Roxio Toast 10 Titanium For Macs

\$99.99\*

[www.roxio.com](http://www.roxio.com)

Use Toast 10 Titanium to burn audio tracks, video clips, and other data to disc. You can also convert files for playback on other devices.



#### Cakewalk Music Creator 5

\$34.99\*

[www.cakewalk.com](http://www.cakewalk.com)

A user-friendly interface lets you bring your music to life and give it a professional sound. You can record, transcribe, and print your very own music.



#### Apple Final Cut Express 4

\$199.99\*

[www.apple.com](http://www.apple.com)

A drag-and-drop interface provides seamless movement between editing, trimming, and adding effects to your videos. The software is compatible with popular HD formats, including HDV and AVCHD.

### Business Applications



#### Microsoft Office Home and Student 2007

\$149.95\*

[www.microsoft.com](http://www.microsoft.com)

The Home and Student version of Microsoft Office 2007 includes Word, PowerPoint, Excel, and OneNote, which meets the basic consumer's needs perfectly.



#### Adobe Acrobat 9 Standard (Upgrade)

\$99\*

[www.adobe.com](http://www.adobe.com)

Upgrade to Adobe Acrobat 9 Standard to easily create, combine, and manage various PDF documents with improved features.



#### Intuit Quicken Home & Business 2010

\$99.99\*

[www.quicken.intuit.com](http://www.quicken.intuit.com)

Features of the 2010 version of Quicken Home and Business include automatic bill reminders and a one-page view of your finances. Plus, it shows you where you're spending and where you can save.



#### TurboTax Business Federal + E-File 2009

\$129.95\*

[www.turbotax.intuit.com](http://www.turbotax.intuit.com)

Corporations, partnerships, and LLCs can complete a federal business income tax return, and a free e-file is included with purchase.

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## Games/ Entertainment



### 2K Games Sid Meier's Civilization IV: The Complete Edition

\$39.99\*

[www.2kgames.com](http://www.2kgames.com)

Get the complete Civilization IV experience with the DRM-free version of classic Civilization IV plus three expansions.



### Her Interactive Nancy Drew Dossier

\$19.99\*

[www.herinteractive.com](http://www.herinteractive.com)

You, as Nancy Drew, go undercover on a movie set to investigate a Hollywood-style mystery. Uncover who is behind suspicious press leaks and production accidents with Nancy's sleuthing skills. Earning points during the game reveals an alternate ending.



### Electronic Arts The Sims 3

\$49.95\*

[www.ea.com](http://www.ea.com)

Create your very own Sims. Customize their personalities, appearances, and homes and then send them out into the world to explore the neighborhood and meet new friends.



### Lego Indiana Jones 2: The Adventure Continues

\$29.99\*

[www.lucasarts.com](http://www.lucasarts.com)

Explore the locations from all four films and build your own levels and environments. And, all of your favorite characters are depicted in Lego form.

## Home Productivity



### Nuance Dragon NaturallySpeaking 10 Preferred

\$199.99\*

[www.nuance.com](http://www.nuance.com)

Dictate emails, reports, and documents much faster than you can type by letting Dragon NaturallySpeaking do the typing for you. The software has an accuracy rate of up to 99%.



### Apple MobileMe

\$99\*

[www.apple.com](http://www.apple.com)

MobileMe, Apple's

Internet service, lets you keep your email, contacts, and calendar up-to-date across your iPhone, iPod touch, Mac, and PC. It also lets you store and share documents online via iDisk, and you can manage everything online through a suite of Web applications at [www.me.com](http://www.me.com).



### DeLorme Street Atlas USA 2010 Plus

\$39.95\*

[www.delorme.com](http://www.delorme.com)

Street Atlas USA 2010 Plus is updated with new roads and road names, and it's now ready for use on any of your favorite devices, such as GPSes, netbooks, computers, and smartphones.



### Susteen Data Pilot Backup & Sync Kit (LG)

\$24.99\*

[www.datapilot.com](http://www.datapilot.com)

Back up and sync your cell phone memory to your computer with a backup and sync kit. Kits for other phone manufacturers are also available.

## Security/ Utilities



### Kaspersky Lab Internet Security 2010

\$79.95\*

[www.kaspersky.com](http://www.kaspersky.com)

Kaspersky Internet Security 2010 includes protection from the latest viruses, spyware, and malware threats.



### Kaspersky Lab Anti-Virus 2010

\$59.95\*

[www.kaspersky.com](http://www.kaspersky.com)

Kaspersky Anti-Virus 2010 includes essential protection against Internet threats, such as viruses, spyware, Trojans, and more as well as phishing and identity theft defense.



### Webroot AntiVirus With Spy Sweeper 2010

\$49.95\*

[www.webroot.com](http://www.webroot.com)

Protect up to three computers from viruses and spyware. Spy Sweeper stops both known and potential threats by blocking suspicious activity and is compatible with Microsoft's Windows 7 operating system.



### Trend Micro AntiVirus + AntiSpyware

\$39.95\*

[www.trendmicro.com](http://www.trendmicro.com)

Automatic scans, updates, and outbreak alerts make it easy to safeguard data and files. Protects against viruses, worms, spyware, and Trojan horses, keeping your personal data safe.

## System Clean-Up & Repair



### Avanquest Fix-It Utilities 10 Professional

\$49.95\*

[www.avanquest.com](http://www.avanquest.com)

Fix-It Utilities 10 Professional can make your computer run like new. It performs more than 250 tests to see what is slowing your computer down and then fixes the problem, giving you better performance.



### iolo System Mechanic

\$49.95\*

[www.iolo.com](http://www.iolo.com)

With System Mechanic, you can find and fix errors and fragmentation on your PC, clean out clutter, and optimize your system for best performance.



### Arconis True Image Home 2010

\$49.99\*

[www.arconis.com](http://www.arconis.com)

This software backs up your entire computer, including the operating system, files, settings, and more, so you can easily recreate your system in the event of data loss.



### iolo DriveScrubber

\$29.95\*

[www.iolo.com](http://www.iolo.com)

When it's time to get rid of your old computer, use DriveScrubber to ensure all of your personal data has been deleted. DriveScrubber will wipe your entire drive, including free space, and restore damaged drives.

## NOTEWORTHY

# Accessories & Services

A computer is a big investment, and now that you've taken the plunge, it's time to decide what accessories you need to go along with that shiny new purchase. We've rounded up several of our favorite extras for every computer owner. Whether you have a laptop or desktop, be sure to add these items to your shopping list to complete your computing experience. **FG**



## KEYBOARD

- An ergonomic design can cut down on the wrist strain associated with carpal tunnel syndrome
- Bluetooth connectivity lends itself to a tidy desk because there's one less wire to contend with
- A specialty model, such as a gaming or media keyboard, adds functionality to your pastime of choice



## EXTERNAL HARD DRIVE

- Protect precious video and photo memories: Back up to an external hard drive
- Keep your computer running more efficiently by saving large files, such as your media collection, on an external drive



## USB HUB

- Offers an affordable way to connect all of your peripherals, even if you have more gadgets than USB ports
- Adds the convenience of easy USB access—no more reaching behind your computer to plug in your USB devices



## MOUSE

- A wireless mouse will cut down on cable clutter at your desk and also offers the convenience of portability for laptop use
- A gaming mouse can deliver better accuracy and speed for the ultimate in control
- Consider customizable buttons if you want to be able to access media, files, or programs with one-touch access



## CLEANING KIT

- Specially designed cleaners will keep your LCD or plasma computer screen clean without running the risk of scratching its surface
- Cloths are often made of low-conductivity material in order to reduce static



## SURGE PROTECTOR

- Ensure the electrical current running to your desktop or laptop computer doesn't exceed proper levels
- Portable models will protect your laptop when you're on the go for work or play



## WEB CAM

- Bridge the gap between long-distance family and friends with online video chatting by adding a Web cam to your setup



## PRINTER

- A quality photo printer will eliminate trips to the drugstore for 4x6 prints and give you the ability to instantly share your photo memories
- An all-in-one model is the perfect addition for any busy family that needs a device that can operate as a copier, scanner, fax, and printer



## COMPUTING SERVICES

To keep your desktop or laptop computer in tip-top shape, take advantage of the computing services offered at your local CE retailer. They can help you keep your machine running smoothly and free from the dangers that lurk online.

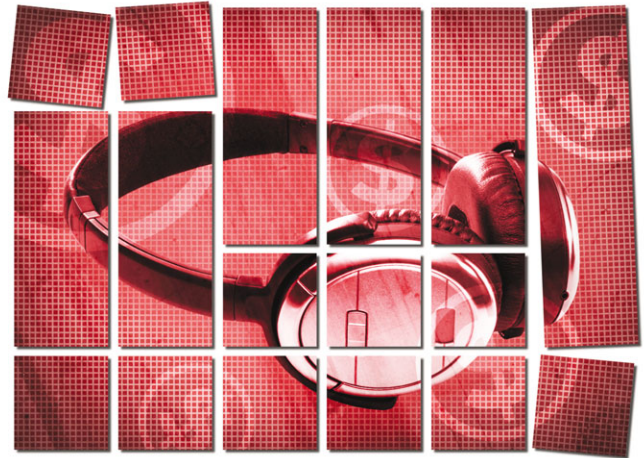
- Computer Setup & Networking
- Virus & Spyware Removal
- Data Backup & Recovery
- Hardware & Software Upgrades
- Training & Consultation



## HOW TO BUY \_\_\_\_\_

# Headphones

### Choose What's Right For Your Ears



**U**ncomfortable headphones are common, but they can become a thing of the past. With the ability to choose from earbud, clip-on, behind-the-neck, and over-the-ear styles, you can listen to your favorite tunes or video game sound with practical comfort and style.

#### Head Things Up

When you consider the unique features of each headphone style, you'll find that there are plenty of benefits associated with each one.

**Earbuds** will provide a comfortable fit as they rest firmly in your ear canal, which is ideal for those times when you're jogging a few miles on the treadmill and you want to avoid your headphones falling off or needing adjustments.

If you're looking for a more enveloping sound but don't want to sacrifice too much comfort, **clip-on headphones** will provide both a secure fit, by hooking behind your ears, and deliver powerful audio.

**Behind-the-neck headphones** combine a snug fit with secure and lightweight earbuds or soft earpads that cover the exterior of your ear. Great for listening to tunes while using your laptop or going for a leisurely stroll, behind-the-neck headphones will work well for extended periods of listening.

The primary benefit of most **over-the-ear headphones** is noise-canceling technology. Covering the listener's ears, noise-canceling headphones employ multiple microphones to drown out ambient noise and enhance the dynamics of the song you're listening to, whether you're sitting next to the airplane engine on a long flight or chilling out in a crowded student union.

#### Use Your Head

There are a lot of specifications to pay attention to when you're picking out

headphones. The size of a pair of headphones' internal speaker drivers, such as 15 to 40mm drivers, can determine the depth and richness of the bass sound it produces—the bigger the driver, the fuller your audio will sound. If you want quick access to your audio's volume control, look for headphones that include an in-line volume control for making sound level adjustments. The sensitivity rating (or loudness) of headphones should be at least 100dB to produce powerful audio output.

The primary benefit of most over-the-ear headphones is noise-canceling technology.

Over-the-ear headphones tend to include the most bells and whistles, with ergonomic designs, 3D surround sound, and ultra-comfortable head straps. Many gamers prefer this style because they can enjoy uninterrupted online gaming with headphone audio systems, such as the Tritton AX 720 Audio System headphones (\$129.99; [www.trittontech.com](http://www.trittontech.com)).

Before you purchase headphones, be sure to consider which specifications and features meet your audio and comfort requirements—your ears will appreciate it in the long run. **FG**

## From Head To . . . Ears

- Earbuds and behind-the-ear headphone styles are ideal for an active lifestyle
- Take note of the comfort differences that in-ear or over-the-ear styles have to offer
- Determine your choice based on when, where, and for what purpose you'll use your headphones

# Stay In The Game Without Staying Home

## FLO TV™ Personal Television



March is the best time of the year for basketball fans, especially when their favorite college teams are in the running for the national championship. Unfortunately, life doesn't always stop long enough for you to catch all the great basketball games this month. But with the FLO TV™ Personal Television (\$199\*; [www.flotv.com](http://www.flotv.com)), you can always keep an eye on the latest sporting events.

### Get Tuned In

Combined with a monthly subscription, the FLO TV™ Personal Television will let anyone within its coverage area† watch the College Men's Basketball Tournament games that will be aired by CBS Mobile. With a tournament game in every scheduled time slot, you won't miss any of the action as you find spare time in between meetings, waiting for your flight at the airport, or standing in line at the grocery store.

### Full-Court Press

Although the FLO TV™ Personal Television is thin and light enough to carry around in a purse or a coat pocket, it's packed full of features. It has on-screen programming menus combined with a 3.5-inch touchscreen, so you can browse and select your favorite TV channels with a swipe of your finger. The device also features a backlight that will automatically adjust its brightness to match the environment you're in.

The integrated speakers offer a full sound that can fill an entire room, letting you and your buddies gather around and watch a close game tick down to the last second. When you want to fully concentrate on an important game, such as when your



FLO TV™ Personal Television | \$199 | [www.flotv.com](http://www.flotv.com)

alma mater plays its conference rival, you can simply plug your headphones into the 3.5mm headphone jack.

### More To Love

The FLO TV™ Personal Television offers other channels, including Adult Swim Mobile, COMEDY CENTRAL, FOX Mobile, MTV, ABC Mobile, NBC2Go, and ESPN for those who also want to watch their favorite TV shows while on the go. For the latest national and financial news, you can tune to CNN, CNBC, FOX News, or msnbc, and if you need to entertain the kids while you wait for an appointment, you can choose from Disney Channel or nickelodeon.

With 24/7 access to TV on an ultra-portable device, you can be sure you and your family don't miss your favorite team fighting for the championship or the shows that matter most. **PG**

## TV To Go

- This month, FLO TV™ Personal Television will offer College Men's Basketball Tournament games on CBS Mobile for college basketball enthusiasts.
- The device is lightweight and small for portability. It also offers a 3.5-inch touchscreen with on-screen programming menus.
- Aside from March basketball and other programming on CBS Mobile, you can also watch content from ABC Mobile, Adult Swim Mobile, CNN, CNBC, COMEDY CENTRAL, the Disney Channel, ESPN MobileTV, FOX Mobile, FOX News, msnbc, MTV, NBC 2Go, and nickelodeon.

\*Purchase the FLO TV™ Personal Television now and receive a six-month subscription.

†Service is not available everywhere. All programming is subject to change and/or blackout restriction. Please see [www.flotv.com](http://www.flotv.com) for more details.

**FirstGlimpse**

# Unleash Your Music Downloads

## Play Music Where You Prefer



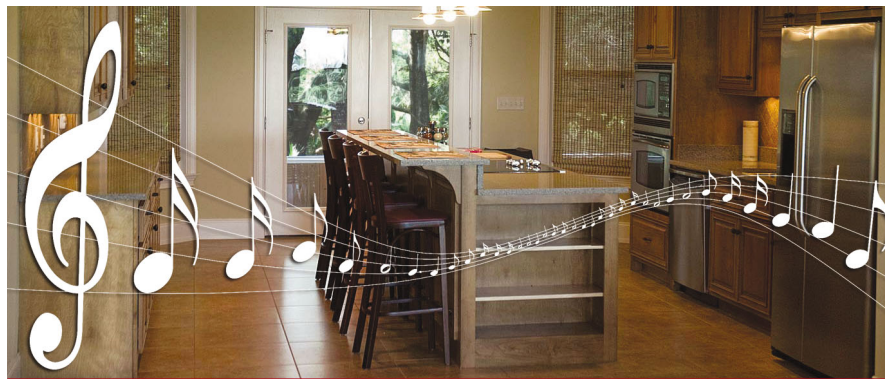
we all know that MP3 players are for listening to music. But your digital music isn't exclusive to one type of listening device. While it's en-

joyable to listen to your tunes in private using your favorite set of headphones, there are other devices that will give you the freedom to listen to your music downloads in the living room, sun room, office, car, and more.

### For Recreation

If the majority of your music files are stored on your MP3 player, but you want to listen to your songs in rich, full sound through a set of speakers, you can opt for an MP3 player dock. Available as stationary or portable models, docks let you connect your MP3 player directly to a set of speakers, so you can listen to your tunes out loud. Many docks are compatible with a broad spectrum of MP3 players and support input via dock connector or stereo audio cable. Or, if you store music files on your mobile phone, you can look for a dock that is compatible with cellular devices.

In addition to docking stations, digital photo frames can play background music to match your slideshows. If your digital photo frame includes a speaker, you can save digital music on a USB drive and plug it into a USB port. Or, if the frame supports Wi-Fi connectivity, you have the option of streaming your



### Digital Music Everywhere

- Docking stations let you connect your MP3 player or phone directly to a speaker system.
- You can listen to your audio files on various sound systems via a wireless home network using a media extender.
- Play the music stored on your MP3 player in your car with a compatible FM transmitter.

music from your favorite download sites, online music services, or other devices, such as your PC.

### For Home Streaming

A wireless home network becomes a wireless music network when you stream songs and Internet music stations from your computer via a media extender that's wirelessly connected to your Internet router. Wireless media extenders will sync with your stereo, home-theater system, or powered speakers and access music from your PC or laptop, so you can enjoy them in one or more rooms in your home; however, note that your wireless home system must be compatible with the syncing feature.

### For Everywhere Else

There's no reason you can't listen to your MP3 player when you're driving around town. Consider purchasing an FM transmitter, which uses your car's stereo system to play songs from your MP3 player through unused radio station frequencies. Some mobile phones are also compatible with FM transmitters, which allows you to play the music stored on them through your car speakers.

With the right accessory, you can listen to your favorite digital music almost anywhere, but it's up to you to choose which one best matches your lifestyle. **FG**

BY JOANNA SAFFORD



# Essential

## THINGS TO KNOW

### INTERNET-CONNECTED GPS DEVICES

**Q** How do Internet-connected GPS devices access the Internet?

**A** Internet-connected GPS devices link to the Web using 3G, the same technology cell phones use. They have a built-in cellular modem that connects to a data network offered by cell phone service providers via cell phone towers.

**Q** Can I connect anywhere?

**A** Because Internet-connected GPS devices use cellular modems to connect to the Internet, you can link to the Web as long as there is a 3G signal available. As with mobile phones, this is rarely a problem in urban areas. In some rural locations, however, a signal might be harder to get.

**Q** What type of GPS device offers a Web connection?

**A** Currently, you are most likely to find Internet access in portable GPS devices.

**Q** What unique features are available with an Internet-connected GPS device?

**A** You can get real-time traffic and weather updates as well as updated fuel prices for gas stations in your area. Additionally, you can view extra information about local businesses and points of interest through live search capabilities.

**Q** What information can I find through Google Local Search?

**A** You can find the most up-to-date business listings in your area, such as restaurants, hotels, museums, and other points of interest. You can also access addresses, phone numbers, reviews, and additional information.

**Q** Are there any additional costs associated with Internet-connected GPS devices?

**A** You will need to sign up for a monthly or annual data service plan through your device's manufacturer or retailer. However, many will let you try the service free of charge for a specified amount of time.

**Q** How will real-time traffic updates benefit me?

**A** With real-time traffic updates, you will automatically be informed about traffic jams, accidents, and road construction on your route, so you can find an alternative one.

**Q** Can I update my map using the Web connection?

**A** Some Internet-connected GPS units will give you access to map updates created by other people using your GPS model at any time.

**Q** What are the benefits of real-time gas prices?

**A** An Internet-connected GPS can compare the prices at nearby gas stations so you can always find the cheapest fuel. You will also be able to find out which fuel stations are closest to your location.

**Q** How can I use Google Maps with my device?

**A** Internet-connected GPS devices that support Google Maps have access to real-time maps and directions. You and your family and friends can also send a physical address to your GPS device using an email address you set up for it.



# MP3 Player Glossary



Who doesn't want an MP3 player? It can help you relax, motivate you, and ensure you always have a song to match your mood. When you head to your local CE retailer to snag one, make sure you have this glossary so you can choose the perfect model.

**AAC**—Short for Advanced Audio Coding, this format is a competitor of the more common MP3 file format. It is the default format used by Apple.

**Click Wheel**—Apple's proprietary circular control on the front of the iPod.

**Certified For Windows Vista**—A Microsoft certification that ensures portable devices, such as MP3 players, and media, such as digital music and videos, are compatible with each other. This was once called PlaysForSure.

**download**—In terms of digital music, downloading is when you retrieve a song from an Internet site or another network connection and save it to your computer or digital music player. You can download songs from music Web sites such as iTunes, Napster, or Rhapsody.

**DRM (digital rights management)**—A security mechanism for digital media, associated with copyright. A common DRM scheme for digital music involves getting a licensed file to authorize playback of a free or purchased song.

**earbuds**—Small, circular devices you put into your ears so you can listen to music on your player. These serve the same function as headphones. Many music players include their own earbuds, but you can purchase a separate

pair that are more comfortable or of better quality.

**flash memory**—Solid-state memory with no moving parts that is lightweight and small. In terms of digital music players, a flash-based player is lighter and smaller than a hard drive-based player, and it also won't skip. Thus, flash-based players are popular for use during exercise. However, the capacity of a flash-based player isn't as large as a hard drive-based player.

**FM tuner**—If your music player has a built-in FM tuner, you will be able to listen to music that is broadcast from local radio stations.

**hard drive**—Storage in which rigid platters are inside a fixed casing. In terms of digital music players, a hard drive-based player is larger and heavier than a flash-based player. Because of the moving parts (the platters), hard drive-based players are also prone to skipping. However, the capacities are much larger than those of flash-based players.

**iTunes**—An application that loads onto your computer and lets you play, organize, download, and purchase music, videos, podcasts, and television shows for your portable media player or computer.



**MP3**—Perhaps the most popular digital audio encoding format. It compresses audio to about one-twelfth the original size while still providing excellent sound. In general, a 1MB MP3 file will last about one minute.

**playlist**—A queue of songs a user creates to play on a computer, burn to a CD, or transfer to an MP3 player. The playlist includes only directions to the location of the songs, not the songs themselves.

**podcast**—A downloadable episode that is similar to a radio program. A user can subscribe to a podcast for updated episodes, or she can download podcasts one at a time.

**screen**—The display on the front of a portable music player. A player's screen can either display in color or black and white.

**WMA**—Windows Media Audio is a digital audio format created by Microsoft.

**widescreen**—A screen with a 16:9 aspect ratio.

# Car Security Terminology

**1-way remote operation**—Refers to a remote start system that supports a single function, such as starting or unlocking your car.

**2-way remote operation**—A remote start system that allows for communication between the remote and the interior system, providing information regarding the car temperature, startup, and security features.

**dome light supervision**—Also known as dome light output, this turns on the overhead interior light when you disarm the car alarm.

**dual-stage shock sensor**—If a car is bumped, a dual-stage shock sensor will beep or vibrate to warn away car thieves. If it is bumped again, the sensor will sound an alarm.

**extended range operation**—Also known as ETR (Extended Remote Range) technology, this feature allows you to activate your alarm system beyond a standard range.

**flashing parking lights**—Lights that will flash anytime your car alarm is armed, disarmed, or triggered.

**glass break sensors**—These devices will add an extra level of security to your vehicle with a sensor that detects the tampering with or breaking of glass windows.

**high-output siren**—This car siren produces a powerful, clear sound that warns you of an intrusion or a security

system breach.

**ignition-controlled locks**—Automatic locks that prevent your car doors from being opened when you start the car or when you drive the car for a specified period of time.

**illuminated entry**—An overhead light that turns on when you open the driver or passenger doors on a vehicle and stays on if the door is left ajar.

**keyless entry**—A keyless entry system allows you to lock and unlock your car by pressing a button on a keychain fob rather than with a key. This key fob might also include a panic button, horn honk, trunk release, or parking light flash.

**LED status indicator**—Some remotes include an LED (light-emitting diode) status indicator, which will use a small LED to indicate whether an alarm is armed or triggered.

**motion sensors**—To detect suspicious activity around and inside a vehicle, you can install a car motion sensor that will set off an alarm or dispatch an alert if any motion sensor zone is breached.

**panic button**—This button is typically located on a remote start or keyless entry key fob. If you're in a compromising position or feel threatened near your car, you can press this button and automatically set off your car alarm.



This is also handy if you forget where you parked.

**remote outputs**—You can use the remote outputs on your car remote control to do such things as roll up your power windows or open the trunk.

**remote start**—Using a wireless transmission, a remote start key fob lets you start your car's engine by pushing a button rather than using a key.

**remote transmitter**—A remote transmitter is the central hub for receiving commands from the remote starter.

**remote trunk release**—This will let you open your trunk by pushing a button rather than inserting the key or triggering the latch.

**starter disable**—If a car alarm has been triggered by a thief, the starter disable will prevent the perpetrator from turning on the engine.

**transceiver**—A combination transmitter and receiver, a transceiver provides a way to communicate via radio.



## Which MP3 Player Is Best For You?

Pods are cool, sure, but you have other choices when it comes to listening to your tunes. This chart compares the most important—and coolest—features from select MP3 players.

		Memory type	Capacities	Songs	Video; FM tuner capabilities	Colors	Battery life
What It Means		Hard drive (moving parts, more capacity) or flash (no moving parts)	How much memory the player has	Based on four-minute songs at 128Kbps, the number a player can hold	Some MP3 players can play video or let you listen to radio stations	Several players offer a variety of color choices	How long the battery will last when playing music
	<b>SanDisk Sansa Clip+</b> MSRP: \$39.99*; \$49.99* SKU 9448564	Flash	2GB; 4GB	500; 1,000	No; Yes	Black, red, blue	15 hours
	<b>Apple iPod shuffle</b> MSRP: \$59*; \$79* SKU 9229765	Flash	2GB; 4GB	500; 1,000 (AAC)	Neither	Black, silver, pink, green, blue	10 hours
	<b>SanDisk Sansa Fuze</b> MSRP: \$69.99*; \$79.99*; \$99.99* SKU 8753789	Flash	2GB; 4GB; 8GB	500; 1,000; 2,000	Both	Black, blue, red, silver	24 hours
	<b>Sony E Series Walkman</b> MSRP: \$79.95* SKU 9443792	Flash	8GB	N/A	Both	Black	30 hours
	<b>Sony S Series Walkman</b> MSRP: \$109.95*; \$129.95* SKU 9443845	Flash	8GB; 16GB	N/A	Both	Black, pink, violet, red	42 hours
	<b>Apple iPod nano</b> MSRP: \$149*; \$179* SKU 9416376	Flash	8GB; 16GB	2,000; 4,000 (AAC)	Both	Pink, orange, green, blue, purple, black, silver	24 hours
	<b>Apple iPod touch</b> MSRP: \$199*; \$299*; \$399* SKU 8771732	Flash	8GB; 32GB; 64GB	1,750; 7,000; 14,000 (AAC)	Yes; No	Black	30 hours
	<b>Microsoft Zune HD</b> MSRP: \$219.99*; \$289.99* SKU 9449581	Flash	16GB; 32GB	4,000; 8,000	Both	Black, silver	33 hours

\*Prices listed in this issue are for general reference and may vary from retailer pricing.

## Which GPS Device Is Right For You?

One of the hottest CE devices around right now is a GPS, and what a useful device it is, too. Here, we compare some models available on today's market. All of these units come with maps already loaded, and you can purchase additional maps, as well.

		Screen size; Dimensions	Text-to- speech; Traffic receiver	Preloaded maps	WAAS	Bluetooth; MP3 play- back	Included charging adapters
What It Means		The diagonal measurement of the screen; height x width x depth	Unit calls out specific street names; unit receives traffic updates and re-routes accordingly	The regional maps that come included with the GPS unit	A satellite and ground station system that gives exceptional GPS accuracy	Some units communicate wirelessly with other Bluetooth devices or play MP3s	AC adapters plug into the wall; DC adapters plug into your car's cigarette lighter
	<b>Nextar 43LT</b> MSRP: \$139.99* SKU 9301052	4.3 inches; 3.2x4.6x0.8 inches	Yes; Yes	Entire U.S.	No	No; Yes	DC adapter
	<b>Garmin nüvi 205W</b> MSRP: \$139.99* SKU 9470556	4.3 inches; 2.9x4.8x0.8 inches	Yes; No	Entire U.S. (including Puerto Rico)	No	No; No	DC adapter
	<b>Magellan SE4</b> MSRP: \$179.99* SKU 9556303	4.3 inches; 3.2x4.8x0.7 inches	Yes; Yes (with optional Traffic Link receiver)	Entire U.S. (including Puerto Rico)	Yes	No; No	DC adapter
	<b>TomTom ONE 140-S</b> MSRP: \$199.95* SKU 9263254	3.5 inches; 3x3.6x0.8 inches	Yes; Yes (with optional traffic receiver)	Entire U.S. (including Puerto Rico) and Canada	No	No; No	DC adapter
	<b>Magellan RoadMate 1700</b> MSRP: \$299.99* SKU 9464153	7 inches; 4.2x7.5x0.6 inches	Yes; No	Entire U.S. (including Puerto Rico) and Canada	Yes	No; No	DC adapter
	<b>Insignia NS-CNV20</b> MSRP: \$349.99* SKU 8947312	4.3 inches; 3.2x4x0.9 inches	Yes; Yes	Entire U.S.	Yes	Yes; No	DC adapter; AC adapter
	<b>TomTom GO 740 LIVE</b> MSRP: \$399.95* SKU 9263281	4.3 inches; 3.4x5x0.9 inches	Yes; Yes	Entire U.S. and Canada	No	Yes; No	DC adapter
	<b>Garmin nüvi 1690</b> MSRP: \$499.99* SKU 9539298	4.3 inches; 3.1x4.9x0.8 inches	Yes; Yes	Entire U.S. (including Puerto Rico) and Canada	Yes	Yes; No	DC adapter

\*Prices listed in this issue are for general reference and may vary from retailer pricing.

NOTEWORTHY

# Accessories & Services

No matter where you go, a wireless device can add enjoyment to your journey. To make sure you are taking full advantage of the capabilities your wireless devices offer, check your local CE retailer for accessories that can enhance your mobile experiences. We've listed our favorites below. **EG**



## GPS CHARGERS

- Make sure your travel companion always has a full battery
- If you do run out of battery, charge your GPS with an adapter; these can plug into a wall, PC, or car's DC outlet



## MP3 PLAYER EARPHONES

- Match earphones to your needs: If you don't want anything bulky, opt for earbuds that fit inside your ear; to hear every musical detail, try headphones that cover the ear completely
- Listen to your music without the interference of background noise with earphones that offer a noise-canceling feature



## MP3 PLAYER DOCKS & SPEAKERS

- Portable speakers let you play music for a group; some include radios and can also play CDs
- Recharge your player's battery with a portable dock as you continue listening to music
- Play your music through car speakers using an FM transmitter



## CELL PHONE HEADSETS

- Keep your hands free while still being able to use your phone
- Link compatible cell phones to a Bluetooth headset to make or take calls without a tangled mess of cables
- Use a headset that offers noise-canceling capabilities to ensure you don't miss any of your conversation



## MP3 PLAYER CASES

- Protect your MP3 player from bumps and scratches
- Quickly access your player's functions with a clip
- Keep your player out of your way with an armband



## CELL PHONE CASES

- Safeguard your phone from wear and tear with a case
- Universal cases fit most sizes of cell phones; some of these will include clips and wrist straps for portability and accessibility
- Fitted cases specifically fit your phone's model type; these can be hard acrylic casings, rubber sleeves, or leather pouches
- Avoid getting scratches and fingerprints on your phone's screen with stick-on or hard, clear screen protectors



## CELL PHONE CHARGERS & BATTERIES

- Keep your phone charged no matter where you are; adapters for your cell phone let you use solar power, your car's DC outlet, wall power, or your computer to charge your phone
- Be prepared for emergencies with extra cell phone batteries



## GPS MOUNTS

- Mounts can be placed on a car dash or stuck to a windshield to be within reach



## MOBILE SERVICES

- Whether your wireless device is brand-new or nearing the end of its life span, your local CE retailer offers services to help you take care of all of your wireless device's needs.
- Protection plans for GPSes, MP3 players, and cell phones
  - Phone and battery recycling
  - GPS setup and deck installation
  - MP3 vehicle integration
  - MP3 player setup and training
  - Cell phone repair services and loaner phones



# HOW TO BUY Gaming Accessories

## Boost Your Gameplay Experience With Add-ons

**A** really good video game immerses you in arresting visuals, audio, and story lines that let you temporarily escape reality and sink into an alternative one.

Gaming accessories enhance the sense of realism while simultaneously bolstering game performance.

People play games for many reasons, including the glimpses at other worlds they provide. Few of us, for example, will ever drive an actual NASCAR car, but a driving game enhanced by a steering wheel accessory with brake, clutch, gas, and stick shift mechanisms can simulate that action. Further, wireless-, communication-, storage-, and cable-related accessories can add convenience, adapt gaming environments to match personal preferences, and improve audio-visual quality.

### Consult The Manufacturer

To find out which accessories are suited to a particular game, console, or PC, check the game developer and console maker's suggestions. Further, know that third-party manufacturers create accessories that often pack advanced features. Logitech's G13 Advanced Gameboard

(\$79.99; [www.logitech.com](http://www.logitech.com)), for example, provides 25 programmable keys to execute specific game-related commands, a built-in LCD to view stats and communicate with others, a minijoystick, and back-lighting for playing in dimly lit settings.

### Check For Compatibility

At some point, you may want to buy additional controllers for multiplayer games or acquire additional features. Beware, though, that a controller that works with one console may not work with another.



Additionally, before buying accessories for a PC, check that the PC's OS and hardware support them. Nvidia's GeForce 3D Stereo Glasses (\$149.99; [www.nvidia.com](http://www.nvidia.com)), for example, can make game details pop, but you'll need a compatible Nvidia graphics card, Microsoft

### THE KEY TO

## Accessorizing

- Check which accessories the game and/or console maker suggests.
- Make sure the accessory is compatible with your gaming setup.
- Buy accessories with integrated force feedback to physically "feel" gameplay.
- Headsets with audio-bolstering technologies will improve communication quality.

Windows 7 or Vista, and a Nvidia 3D Vision-ready display to view the effect.

### Can You Feel It?

Whether hitting a tennis ball, nose-diving a jet fighter, or battling a large-mouth bass, accessories with integrated force feedback technology bring the physicality occurring within a game out into the real world. In a driving game, for example, look for a steering wheel with force feedback technology to get a better sense of what crashing into a wall, going airborne, or driving on a slick track at 200mph feels like.

### Built To Communicate

Many games let you play and communicate simultaneously with others via an Internet connection and wired/wireless headset. Communication is particularly important in MMORPG games where you're a team member. A headset with noise-canceling and echo-reducing technologies will reduce ambient noise and generate clearer speech.

Whatever your reason for gaming, accessories reinforce and improve the overall experience. **FG**

BY BLAINE FLAMIG

# The Well-Connected Entertainer

## Microsoft's Xbox 360

**S**ome people believe playing games is the only reason to buy a gaming console. In the case of Microsoft's Xbox 360 ([www.xbox.com](http://www.xbox.com)), they couldn't be more wrong. Beyond stellar gameplay, the Xbox 360 is one device that enables instant access to HD movies, music, friends, and more. (To learn more about connectivity possibilities such as these in your home, read "Link It Up" on page 36.) Add in the ability to wirelessly stream personal and online media over a home network, and it's easy to understand why millions of people have made the Xbox 360 their home theater's gaming and entertainment hub.

### Game On

Although the console is capable of much more, if you were to only ever use the Xbox 360 for gaming, you would be in great hands. Both the Xbox 360 Arcade (\$199.99; 256MB storage) and Xbox 360 Elite (\$299.99; 120GB storage) support Xbox 360 game titles in true HD quality (up to 1,920 x 1,080 with an HDMI cable), while the Elite also adds support for over 300 original Xbox titles. Both consoles include an Xbox Live Silver membership, giving you free game demos and add-ons; voice and text chatting; avatars; and access to new, retro, independent, and on-demand games for purchase in the Xbox Live Game Marketplace. An Xbox 360 Gold subscription (\$49.99 annually) adds in multiplayer online gaming, video chatting, photo sharing, and early access to new game demos and exclusive discounts.

Microsoft Xbox 360 Elite  
\$299.99  
[www.xbox.com](http://www.xbox.com)

### A World Of Entertainment

Equally as impressive as the Xbox 360's gaming prowess is its multimedia muscle. Through Zune On Xbox Live, you can rent and buy HD movies in 1080p, 5.1-surround sound quality straight from the console for instant streaming. You can also download and watch your movie purchases later on your PC and Zune HD. With Xbox Live Party, meanwhile, Live Gold subscribers can chat with up to seven friends in different locations while watching a movie. Live Gold members can also stream thousands of Netflix ([www.netflix.com](http://www.netflix.com)) movies and TV shows, play millions of songs from preset and customized Last.fm ([www.lastfm.com](http://www.lastfm.com)) radio stations, and stay up-to-date on friends' Facebook ([www.facebook.com](http://www.facebook.com)) and Twitter ([www.twitter.com](http://www.twitter.com)) statuses all from the Xbox 360 dashboard.

### The Talented Xbox 360

**W**ith an Xbox 360, you can:

- Play online multiplayer games
- Instantly stream HD-quality movies in 5.1 surround sound
- Play thousands of Netflix movies
- Stream millions of Last.fm songs
- Follow friends on Facebook and Twitter
- Stream personal and online media



### Make A Connection

One of the Xbox 360's best but more unheralded features is its ability to stream media stored on a PC with Windows Media Center support over a wired or wireless home network to your home theater. This includes streaming PC-stored Zune media; Internet TV shows; and songs, photos, and videos from your personal library.

### It's Your Call

The problem with owning an Xbox 360 isn't having enough choices; it's what to do first. Whether it's fragging enemies online with friends, taking in a romantic comedy in HD with your husband, queuing up a party soundtrack, or streaming vacation videos from the office PC to your living room, the Xbox 360 has you covered and then some. **PC**



# Parental Control

## Restrictions For Your Kids' Gaming



Game consoles let kids do much more than just play video games. They can access the Internet, download media, and play CDs and DVDs. While this

makes for a great entertainment station for your family, it can make controlling the content your kids can access more difficult.

Many game console manufacturers try to make a parent's job easier by including parental controls that let you restrict access to content from a variety of media sources. Most let you lock and unlock parental settings with a PIN or a password to ensure your kids aren't going to be able to get their hands on inappropriate content. Or, if you have kids of various ages, some game consoles will let you create individual accounts (or game

console user accounts), letting them access content appropriate for them. And to prevent your kids from creating new accounts that don't apply to the family settings, certain consoles will prohibit the creation of new usernames and memberships without the parental control PIN.

### Content Restrictions

ESRB ratings are designed to inform parents of a game's content so they can decide if it's suitable for their children. Some consoles let you restrict ESRB ratings so only games with a particular rating can be played on the console or downloaded from an online store. Parents might also have the option of blocking certain movie ratings, such as PG-13- or R-rated content, depending on the console.

Many games can be accessed online through the console's Web browser

without having to download them to the actual console, so some let you decide whether your child can access Internet or live games. Depending on your console, you might be able to control the level of the Internet restriction. Or if your console provides access to an online store, you can adjust settings that will allow particular access. Some consoles will block a user from using the Web browser, while others will let you plug in keywords or URLs to block. And if you don't want Junior and his friends spending lots of money on games while you're not home, you can restrict access to the online store so you have the final say about purchases.

### Time Restrictions

To prevent your youngsters from spending too much time in front of the TV, you can place daily or weekly game-play time limits on most game consoles. These settings will block children from playing games beyond the time limits you implement by prompting the user to enter a parental control PIN or password to play games for a longer amount of time. Also, depending on the console, parents can also look up how long their children have been playing video games.

### Not Just For Kids

Because adults enjoy the benefits of having a game console just as much as kids do, you can turn off parental control settings anytime you want. All you need is your PIN or password, and you can access movies or games that aren't age-appropriate for your children. You also have the option of disabling the game console's parental settings and re-enabling them when you're done using your game console. Oftentimes, a game console won't require that you re-enter parental settings after you've turned them back on. **PG**

BY TESSA WARNER BRENNEMAN





# Game Guides

## Get The Most Out Of Gaming

**M**astering a video game can be difficult, even if you typically enjoy every game you play. You can make a commitment to painstakingly conquer each level of a role-playing game and pace yourself as you pick up tricks and tips along the way. But if you want to maximize your gaming experience, you can invest in comprehensive game guides. These are available for any genre, including first-person shooter games, simulation games, and sports games. Keep reading to find out how you could benefit from a game guide and how your gaming prowess might significantly improve with the help of one.

### Use Your Resources

In general, game guides will include maps that identify critical locations and provide instructions for defeating enemies as well as lists of collectibles, cheat codes, and details for acquiring achievements. Most game guides will also feature walkthroughs, which are designed to help you complete the different levels of the game.

Game guides let you take advantage of all aspects of the game by highlighting

certain items or maneuvers in the game that you might overlook without explanation or direction. In some cases, you may need a game guide to determine where to travel next, which is a common necessity in first-person shooter or action-adventure games. Additionally, multiplayer game guides may contain tactics for playing against your opponent or as a team.

New gamers may benefit the most from game guides because they can learn about the game itself while accomplishing the mission along the way. Seasoned gamers will appreciate explanations of any tricks or shortcuts they may not have uncovered yet.

### GAME GUIDE BASICS

- Game guides inform you of in-game bonuses and side quests.
- A game guide will typically include maps, cheats, codes, and lists of important items to aid you in your gaming challenges.
- Look for game guides that are appropriate for certain types of gameplay. Options are available for multiplayer, first-person shooter, and adventure games.

### Gaming Glory

Each gaming genre—such as action, life simulation, strategy, and more—includes a guide specifically associated with its type of gameplay. For instance, a first-person shooter game might feature single-player mission guides and breakdowns of levels from various gaming experts. A football video game could cover playbook features, team strengths, or team roster statistics, so you know your opponent.

Some games are a combination of two genres, such as dual action and role-playing. In this type of game, it would be beneficial to consult a game guide to defend your player against enemies and discover strategies for completing specific activities.

### Go Get 'Em Gamers

Whether you're an avid gamer or casual gaming enthusiast, game guides can be sources of relevant data. For example, if you don't want to neglect integrated side quests (alternative goals to secure an in-play reward), you can use a game guide to view an outline of the entire game and thereby embrace more aspects of the game.

With a thorough game guide, you should be able to research every step required to successfully complete the game—the way you win is always up to you, however. **EG**

BY JOANNA SAFFORD

# Essential

## THINGS TO KNOW

### eReaders

#### Q What is an eReader?

A An eReader is a portable electronic reading device that lets you download, read, and store reading material, such as ebooks (electronic books).

#### Q What types of content can I enjoy with an eReader?

A In addition to ebooks, most eReaders will let you download or subscribe to periodicals, such as newspapers and magazines. Some eReaders will even let you subscribe to blogs, enjoy both audio books and photos, and access PDF or Word documents.

#### Q What file formats can eReaders support?

A Aside from ebook formats, most eReaders are compatible with PDF, Microsoft Word, and text files. Some support ePub files, the industry standard format for public domain titles, and MP3, AAC, or JPEG files.

#### Q Where can I find content for my eReader?

A The eReader manufacturer will have an online store to purchase content from. Some eReaders will let you get content from other online sources and from public libraries.

#### Q Do I need a computer to download content to my eReader?

A You can download the content to your computer and transfer it to the eReader with a USB cord. Or, some eReaders will let you download content directly to your device using a 3G Web connection.

#### Q Will I have to pay any additional fees after buying my eReader?

A Aside from the cost of ebooks, subscriptions, and other content, most eReaders don't charge additional fees.

#### Q What is E Ink?

A eReaders use this screen technology to imitate the ink-on-paper appearance of regular books. This feature prevents eyestrain because the eReader doesn't use a back-light like mobile phones and computer screens do. It also prevents screen glare that can be caused by sunlight. E Ink also lowers power consumption.

#### Q How do I navigate an eReader?

A Many eReaders offer hardware buttons that let you select ebook titles, turn the page, and navigate through the user interface. Others, however, use touchscreens that let you turn the page, bookmark your page, and search for more titles with a swipe of your finger or a stylus.

#### Q How much memory will I have to store content on my eReader?

A eReaders usually offer between 512MB and 2GB of internal storage. Some models will let you supplement the internal storage with compatible memory cards.

#### Q What other features do eReaders offer?

A Many eReaders will let you adjust the text size, add bookmarks to mark your place, highlight content, add notes, and look up terms in a built-in dictionary.



# ESRB Game Ratings & Descriptions

## Find Material That's Appropriate For Your Kids

### ESRB (Entertainment Software Rating Board) Ratings

In order for parents to select gaming software appropriate for their children, ESRB ([www.esrb.org](http://www.esrb.org)) ratings are listed on the front and back of most game packages to provide concise and impartial details about a title's content.



#### Early Childhood.

Titles with this rating have content that may be suitable for children ages 3 and older. These software titles contain no material that parents would find inappropriate.



**Everyone.** Titles with this rating have content that may be suitable for children

ages 6 and older. Games in this category may contain minimal cartoon, fantasy, or mild violence and infrequent use of mild language.



#### Everyone 10+.

Titles with this rating have content that may be suitable for children ages 10 and older. Games in this category may contain more cartoon, fantasy, or mild violence and language as well as minimal suggestive themes.



**Teen.** Titles with this rating have content that may be suitable for children ages

13 and older. Titles in this category may contain violence, suggestive themes, crude humor, minimal blood, simulated gambling, or infrequent use of strong language.



**Mature.** Titles with this rating have content that may be suitable for persons

ages 17 and older. Games in this category may contain intense violence, blood and gore, sexual content, or strong language.



#### Adults Only.

Titles with this rating have content that is only suitable for persons 18 years and older. Games in this category may include prolonged scenes of intense violence, graphic sexual content, or nudity.

For additional information, ESRB ratings on the back of game packages include content descriptions and depictions.



## Gaming Tips For Parents

Aside from checking a game's ESRB ratings, there are other ways you can ensure the games your youngsters are playing are age-appropriate.

- Carefully look at everything on a title's packaging, including the game graphics.
- Find game reviews, screenshots, or demos to get a better idea of a game's content.
- If available, use the game's parental controls to restrict inappropriate content.
- Learn about games by talking to other parents and older children who are familiar with or have played certain titles.
- Participate in your children's gaming and discuss their games as much as possible.
- Be aware of nonrated ESRB material a game may contain. "Mods" are program downloads that can alter a game's content, and online games often have live player chats as well as other user-generated content.





## Where The Wild Things Are

Rating: PG • Format: Blu-ray Disc



RELEASE DATE:  
**3/2/2010**

MSRP: \$35.99\*  
SKU: 9741161



## Precious

Rating: R • Format: Blu-ray Disc



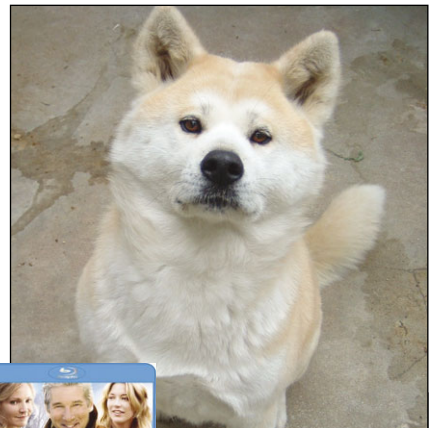
RELEASE DATE:  
**3/9/2010**

MSRP: \$39.99\*  
SKU: 9731022



## Hachi: A Dog's Story

Rating: G • Format: Blu-ray Disc



RELEASE DATE:  
**3/9/2010**

MSRP: \$24.99\*  
SKU: 9748516

# This Month's Blu-ray Disc Releases

## March 2 to 8

"2012" • \$39.95\* • SKU: 9748534  
 "Alice" • \$24.99\* • SKU: 9731031  
 "Clash Of The Titans" • \$29.99\* • SKU: 9794241  
 "Eureka Seven" • \$34.99\* • SKU: 9795037  
 "Kurokami 1" • \$19.99\* • SKU: 9795019  
 "Ninja" • \$19.99\* • SKU: 9795046  
 "Ponyo" • \$24.99\* • SKU: 9738826  
 "The 36th Chamber of Shaolin" • \$19.97\* • SKU: 9739024  
 "The Neverending Story" • \$19.99\* • SKU: 9793912  
 "The Private Lives Of Pippa Lee" • \$29.98\* • SKU: 18351019  
 "The Who: The Kids Are Alright" • \$24.95\* • SKU: 9721644  
 "Where The Wild Things Are" • \$35.99\* • SKU: 9741161  
 "WWE: Royal Rumble 2010" • \$24.99\* • SKU: 9730157

## March 9 to 15

"Capitalism: A Love Story" • \$24.99\* • SKU: 9738853  
 "Creatures Of The Thaw" • \$20.98\* • SKU: 18405065  
 "Crouching Tiger, Hidden Dragon" • \$24.95\* • SKU: 8165558  
 "Glacier National Park" • \$24.98\* • SKU: 18364456

"Hachi: A Dog's Story" • \$24.99\* • SKU: 9748516

"Jcvd" • \$24.99\* • SKU: 18403804

"Midnight Movie" • \$24.99\* • SKU: 18403813

"NFL: Super Bowl XLIV Champions" • \$34.99\* • SKU: 9794038

"Old Dogs" • \$44.99\* • SKU: 9750008

"Planet 51" • \$26.99\* • SKU: 9748525

"Possession" • \$29.99\* • SKU: 9270246

"Precious: Based On The Novel 'Push' By Sapphire" • \$39.99\* •  
SKU: 9731022

"The Boondock Saints II: All Saints Day" • \$34.95\* • SKU: 9740939

"The Last Shangri-La" • \$29.99\* • SKU: 18404994

"Ultimate Fighting Championship: Best Of 2009" • \$29.97\* •  
SKU: 9738771

"Vexille" • \$24.98\* • SKU: 18109011

"Wild Australia" • \$20.98\* • SKU: 18405029

## March 16 to 22

"Armored" • \$38.96\* • SKU: 9748589

"Astro Boy" • \$24.99\* • SKU: 9782677

"Breaking Bad: The Complete First Season" • \$49.95\* •  
SKU: 9729873

\*Prices listed in this issue are for general reference and may vary from retailer pricing.



## Did You Hear About The Morgans?

Rating: PG-13 • Format: Blu-ray Disc



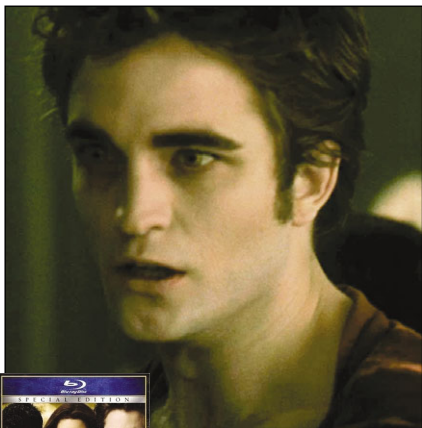
RELEASE DATE:  
**3/16/2010**

MSRP: \$34.95\*  
SKU: 9778556



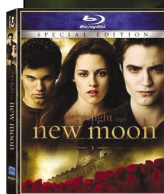
## The Twilight Saga: New Moon

Rating: PG-13 • Format: Blu-ray Disc



RELEASE DATE:  
**3/20/2010**

MSRP: \$34.99\*  
SKU: 9761544



## The Blind Side

Rating: PG-13 • Format: Blu-ray Disc



RELEASE DATE:  
**3/23/2010**

MSRP: \$35.99\*  
SKU: 9717226



- "Breaking Bad: The Complete Second Season" • \$49.95\* • SKU: 9729864
- "Brief Interviews With Hideous Men" • \$29.98\* • SKU: 18378531
- "Broken Embraces" • \$34.95\* • SKU: 18426022
- "Clash Of The Gods: Complete Season 1" • \$39.95\* • SKU: 18318852
- "Did You Hear About The Morgans?" • \$34.95\* • SKU: 9778556
- "Fallen Angels" • \$29.95\* • SKU: 18382616
- "Ninja Assassin" • \$29.99\* • SKU: 9794287
- "Paris" • \$29.98\* • SKU: 18378568
- "Shadowboxer" • \$19.97\* • SKU: 18391468
- "South Park: Complete 13th Season" • \$37.99\* • SKU: 9770041
- "The Fourth Kind" • \$36.98\* • SKU: 9749912
- "The Princess & The Frog" • \$27.99\* • SKU: 9778501
- "The Twilight Saga: New Moon" • \$34.99\* • SKU: 9761544
- "Unrivalled" • \$24.99\* • SKU: 9759406
- "The Wizard Of Oz" • \$28.99\* • SKU: 1844679
- "Wonderful World" • \$29.98\* • SKU: 18375859

### March 23 to March 29

- "Brothers" • \$39.99\* • SKU: 9759294
- "Fantastic Mr. Fox" • \$27.99\* • SKU: 9769852

- "Free Willy: Escape From Pirate's Cove" • \$35.99\* • SKU: 9741489
- "Mad Men: Season 3" • \$34.99\* • SKU: 9759346
- "Red Cliff, Part I" • \$17.99\* • SKU: 18418475
- "Red Cliff, Part II" • \$17.99\* • SKU: 18418484
- "Spring 1941" • \$29.98\* • SKU: 18355898
- "The African Queen" • \$39.99\* • SKU: 9692796
- "The Blind Side" • \$35.99\* • SKU: 9717226
- "The Men Who Stare At Goats" • \$23.99\* • SKU: 9773002
- "Toy Story" • \$24.99\* • SKU: 9738871
- "Toy Story 2" • \$24.99\* • SKU: 9738753








### March 30 to April 5

- "Alvin & The Chipmunks: The Squeakquel" • \$29.99\* • SKU: 9807861
- "An Education" • \$38.96\* • SKU: 9748659
- "Collateral" • \$24.99\* • SKU: 9770148
- "La Traviata At La Scala" • \$10.98\* • SKU: 18443792
- "National Geographic: Big Sur" • \$29.99\* • SKU: 18400725
- "Nova: What Darwin Never Knew" • \$29.99\* • SKU: 18399558
- "Sherlock Holmes" • \$24.99\* • SKU: 9790633
- "The Diary Of Anne Frank" • \$29.98\* • SKU: 18355952
- "Vampyres" • \$29.95\* • SKU: 18364217

## Which Gaming System Is Best For You?

Game consoles and portable devices are no longer limited to gameplay. They can also access the Internet, download media, and play your favorite DVDs or CDs. To help you find a gaming device that will suit you well, here's a comparison of the most popular selections you can find at your local CE retailer.

at your local CE retailer.

		Hard drive size	Compatible memory cards	Optical drive	Video resolution output	Ports	
	What It Means	How much data the system can hold	Cards that will let you save and off-load data, such as game saves or personal media	Aside from game discs, other playable media formats	Highest number of video pixels that are sent to a TV or portable console screen	Hookups for controllers as well as video and audio outputs	
Console Devices		<b>Sony PlayStation 3</b> MSRP: \$349.99* SKU 9611611	250GB 2.5-inch Serial ATA	PlayStation and PlayStation 2 cards with optional USB memory card adapter	CD, DVD, BD	1,920 x 1,080	1 A/V, 1 Ethernet, 1 HDMI, 1 optical digital audio, 2 USB
		<b>Nintendo Wii</b> MSRP: \$199.99* SKU 8008559	512MB	SD/Nintendo GameCube Memory Card	Can only play game titles	720 x 480	4 controller, 1 Component, 1 Composite, 1 S-Video, 2 USB
		<b>Microsoft Xbox 360 Elite</b> MSRP: \$299.99* SKU 9460763	120GB	Xbox 360 Memory Unit	CD-RW, DVD-RW, and more	1,920 x 1,080	1 A/V, 1 Ethernet, 2 memory, 1 HDMI, 3 USB
Portable Devices		<b>Nintendo DSi</b> MSRP: \$169.99* SKU 9249725 (blue)	256MB	SD	None	Dual 256 x 192	1 headphone, 1 microphone
		<b>Nintendo DS Lite</b> MSRP: \$129.99* SKU 8566312	None	None	None	Dual 256 x 192	1 headphone, 1 microphone
		<b>Sony PSP go</b> MSRP: \$249.99* SKU 9459659	16GB flash memory	Memory Stick Micro	None; download to internal and removable memory only	480 x 272	1 USB, 1 headphone
		<b>Sony PlayStation Portable 3000</b> MSRP: \$169.99* SKU 9175082	64MB	Memory Stick Duo/Memory Stick Pro Duo	UMD (Universal Media Disc)	480 x 272	1 video out/headset, 1 USB, 1 DC out

\*Prices listed in this issue are for general reference and may vary from retailer pricing.



	Online community	Wi-Fi access; Media streaming	Parental controls	Compatible game formats	Included accessories & services	Available accessories	Controllers	Perfect for
	Web site membership for downloads, upgrades, and more	Access the Internet without a cable hookup; Send and receive media wirelessly	Help parents decide what content their kids can or cannot access	Game titles that can be played on the game system	Accessories included with the console	Extras that can help enhance your gameplay	Included controllers; wired/wireless controller compatibility	Who can benefit from the special features the gaming system offers
	Yes, free PlayStation Network membership	Yes, 802.11b/g; Yes	Included; Options available for PS3 games, BDs, DVDs, and Internet	Sony PlayStation 3 titles and select PlayStation titles	DualShock 3 wireless controller, USB cable, PlayStation Network membership, A/V cable	Blu-ray remote, Bluetooth headset, memory card adapter, wireless keypad, cables	Includes 1 DualShock 3 wireless controller; wireless	Someone who wants the value of a full gaming system with a BD player and media streaming
	Yes, various paid and free Wii Channels are available	Yes, 802.11b/g; Netflix streaming available this spring	Included; Options available for Wii titles, online features and downloads, and more	Nintendo GameCube and Wii titles	Wii remote and nunchuck, sensor bar, Wii Sports game, console stand, A/V cable, adapter	Wireless Wii remote, wheel, classic (wired) controllers, wireless sensor bar	Includes 1 wireless Wii remote and nunchuck; Both (some titles require a wired remote)	Gamers of any age who want a unique wireless gaming experience that requires little gaming knowledge
	Yes; free Silver membership to Xbox Live and free Gold membership for one month	Available with optional networking adapter accessory; Yes	Included; Options available for Xbox Elite console and Xbox Live	All Xbox 360 games and more than 300 Xbox games	Wireless controller, headset, A/V cable, network cable, Netflix trial	HDMI cable, Xbox 360 hard drive, universal media remote, networking adapter	Includes 1 wireless controller; wireless	Those who want to play games in HD with full theatrical sound and need a console with plenty of hard drive space
	DSiWare (DSi online store)	Yes; Yes	Included; Available for Nintendo DSi content	Nintendo DSi and Nintendo DS titles	AC adapter, 2 styli	Audio headset, battery power pack, screen protectors, carrying cases, styli	N/A	Users who want a handheld gaming system that lets them take, personalize, and share photos
	Yes, free Nintendo Wi-Fi connection	Yes, 802.11b; No	Not included	Nintendo DS and Game Boy Advance titles	AC adapter, cartridge slot cover, stylus	Cases, AC adapter, headphones with microphone, styli, cartridge case	N/A	Anyone who will appreciate dual touchscreens and voice-controlled gaming
	Yes, PlayStation Network	Yes, 802.11b; Yes	Included	Available for download from PlayStation store	AC adapter, USB cable, Media Go software, Rock Band Unplugged Lite voucher	Protective screen film, cradle, headphones, memory cards, cases	N/A	Those who need a bigger screen for their gaming, Internet, and media entertainment
	Yes, free PlayStation Network membership	Yes, 802.11b; No	Included; Options available for UMDs, Internet, and video downloads	PlayStation Portable titles	AC adapter, AC power cord, battery pack, video rental through PlayStation Network	Battery charger, travel case, memory cards, A/V cable, AC adapter, car adapter	N/A	Those who want to enjoy gaming as well as movies, photos, and music when they're on the go

## NOTEWORTHY

# Accessories & Services

The gaming experience goes beyond the game itself—you need the right console peripherals and the best just-in-case services. We've compiled a list of some of the must-have accessories that will only enhance your gameplay, so be sure to remember these items on the next trip to your local CE retailer. **FC**



## RACING WHEELS

- A gaming steering wheel puts you in the driver's seat of a virtual race
- A comfortable, accurate wheel should give you more control with turns, braking, and acceleration
- Be sure to purchase a racing wheel that's compatible with your specific gaming console



## USB DEVICES

- A USB media hub will let you connect other USB devices (including MP3 players and portable gaming devices) to your game console
- Use a USB rechargeable battery pack to charge the Li-Ion battery for guitar controllers



## GAMING KEYBOARD

- Adding a keyboard can help game efficiency—type in text codes and chat with other players quickly
- Look for a model with a touchpad so you can easily scroll around the game display
- Models that offer hotkeys will enable you to quickly perform gaming tasks, such as gameplay actions



## MUSIC CONTROLLER ACCESSORIES

- Add a heavy-duty bass pedal to your gaming drum set to replace your standard pedal
- A tripod microphone stand will make your song-based games more true-to-life
- Extra cymbals for your rock drum kit will give you more freedom to express musical ability



## EXTERNAL MEMORY

- External hard drives, USB drives, or memory cards back up your in-progress games
- When additional memory is connected to live (on-line) games, you can save gaming content and downloads
- The more memory you have, the more games and downloads you'll be able to store



## HEADSETS

- Use a hands-free headset to enhance your gaming experience by planning strategies aloud with your team
- A Bluetooth 2.0 headset is designed to communicate with your gaming console; Bluetooth headsets will be compatible with most game consoles
- Consider noise-canceling headsets with echo-minimizing microphones so you can hear and be heard clearly



## WIRELESS CONTROLLER

- Bluetooth technology lets you play while also having the freedom to move around
- Some controllers use traditional AAA batteries to sustain your playing time
- Find the best design for your grip: ergonomic or traditional



## GAMING SERVICES

Your local CE retailer provides some helpful services, both in-home and in-store, to enhance your gaming console. Specifically, the professionals can set up online connections, install system updates, and transfer data to a gaming storage device.

- Online account configuration
- Console system updates
- Stream media from a PC to a gaming console
- Connect a console to a home-theater center

# NETWORK-ATTACHED STORAGE



If you've ever plugged an external hard drive into your computer, it was probably for one of three reasons: backing up your computer's hard drive; increasing its storage space; or transporting large files, such as video or a music collection, from one computer to another.

With a single NAS (network-attached storage) unit, you can bestow these benefits, and more, on every computer that's connected to your home network. Although NAS was once almost exclusively found in the business world, as more and more consumer-friendly models emerge, NAS makes perfect sense for home use, too.

## How NAS Differs From Other External Drives

The typical external drive meant for one computer is a single drive that connects to its destination by a USB or FireWire cable. NAS is a different animal.

First, it connects to your network hub, be it a hardwired-only or Wi-Fi router.

NAS also uses an Ethernet cable, a high-speed data cable that's standard in network setups.

Second, most NAS enclosures have slots for two or more hard drives. You can often, although not always, decide how these multiple drives are implemented: (1) with their total combined storage space available; (2) mirroring each other, with the additional drive(s) backing up the first to protect against data loss in case of drive failure; or (3) a hybrid of the first two methods—for example, a four-drive NAS that uses one pair of drives for storage and the other pair for mirroring them. NAS units are typically compatible with 1TB and 2TB hard drives, so with multiple drives working together, you could add a total of 4TB, 6TB, 8TB, or even more terabytes of network storage—plenty for home use.

Finally, an NAS unit often has its own applications to help you store and manage files and stream media content throughout your home.

Although NAS requires a little more setup time than a plug-and-play

drive, once it's up and running, it really can make life easier for everyone in your home.

## Play It Your Way

The great advantage NAS has over regular external drives is the tremendous flexibility in how you can use it.

Most obviously, perhaps, it can function as a consolidated backup destination for all the computers on your network. This can be especially helpful for safeguarding the data on Wi-Fi-enabled notebook or netbook computers, which you might not regularly (or ever) protect by connecting them to a wired external drive.

The real fun begins, however, when you use NAS as a server that makes various types of content available to every family member on their personal computers or other preferred devices.

For instance, you could browse the family photo collection on a notebook PC out on the patio while your son fuels a homework session by streaming his favorite tunes to his bedroom gaming



console. Meanwhile, your daughter is dancing to a few music videos in the privacy of her room, and your spouse is unwinding on the sofa in front of the HDTV, watching a digital copy of a recent blockbuster feature film.

You could also use NAS as a central location for projects and resources you want to make available to one and all. Home movies that anybody can take a turn at editing? Give it a try on NAS. A household calendar where everyone can post his or her schedule? Coordinating them on the home network can help head off potential conflicts. A chores list, updated weekly? Now there's no excuse for anyone not to understand the division of labor.

Assuming your home network is connected to the Internet, most NAS units also give you the option of accessing them from outside the home. If you're on a business trip, this could provide additional assurance that you always have the files you need. You could even share photos and home movies 24/7 with relatives halfway around the world.

### Here, There & Everywhere

To paraphrase an old poet, no one is an island. That's increasingly true of computers and other digital devices. Network-attached storage fits right into that future, making your files available when and where you need them. **FG**

BY BRIAN HODGE

## Netgear's Stora 1TB Home Network Server

**N**etwork-attached storage may seem like a complex beast to wrangle, but Netgear's Stora MS2110 (\$229.99; [www.netgear.com](http://www.netgear.com)) is designed to be almost as plug-and-play simple as a regular USB or FireWire drive. It's ideal for people who want to balance minimal setup effort with maximum convenience.

The Stora plays nice with not only PCs and Macs, but also with Sony's PlayStation 3, Microsoft's Xbox 360, iTunes, compatible HDTVs, and more. You can access and manage your files in whatever way is handiest for you: through the Stora's own interface, a Web browser, or with Windows Explorer or the Mac OS Finder.

Included is a single 1TB hard drive, but it also has an empty bay if you need to add more storage down the road. Simply pop in a second 1TB drive, and it will automatically go into mirroring mode to back up the contents of the first drive.

The unit also features a USB port so you can attach a peripheral device to further expand its functionality. If you have a spare USB drive lying around, you can plug it in and use it as a second network storage device that's accessible through the Stora's browser.

By connecting a printer to the Stora, everyone on your network will have access. This will spare the entire household the hassle of shuttling files between computers or firing up your main machine just to run a quick printout of a document or photo on your kids' PC. ●



Netgear Stora MS2110 | \$229.99 | [www.netgear.com](http://www.netgear.com)

# GREEN SLIM PROJECTOR



## POWER-UP THE FUTURE.

### CASIO'S GREEN SLIM PROJECTOR FEATURES A REVOLUTIONARY NEW PATENT-PENDING HYBRID LIGHT SOURCE.

Casio is once again leading the way with an innovative semiconductor light-source technology that combines LED and laser light to create a completely new, mercury-free light source. These high brightness projectors have up to 2500 ANSI lumens performance, creating brilliant, natural colors and have instant on/off capability. When it comes to the environment, Casio sets the standard with a mercury-free light source you can rely on over the next ten years – up to 20,000 hours. Green Slim Projectors are virtually maintenance-free which saves time, money and the environment.

Images with the vitality and clarity of rich colors and fine details make every night of home entertainment a memorable experience. For more information on how to find the best projector for your home theater needs, visit [greenslimprojector.com](http://greenslimprojector.com).



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